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THE
FLORICULTURAL
CABINET,
AND
FLORIST'S MAGAZINE.

Conducted by

Joseph Harrison

Editor of the

GARDENER'S RECORD,

&c.



J. & J. Parker

London, Whittaker and Co. Ave Maria Lane

THE
FLORICULTURAL
CABINET,

AND
FLORISTS' MAGAZINE,

JANUARY TO DECEMBER, 1837.

VOLUME V.

CONDUCTED BY MR. JOSEPH HARRISON,

NURSERYMAN,

DOWNHAM NURSERY,

NORFOLK.

LONDON :

WHITTAKER & Co. AVE MARIA LANE,

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PREFACE.

IN presenting our readers with the Fifth Volume of the Floricultural Cabinet, we do most unfeignedly offer our most sincere thanks to our numerous subscribers and contributors for their patronage and support.

Although, with each former Volume, we had the high gratification of an increasing demand, yet the circulation has extended more during the present year than any previous one, since our first Volume was published, and the sale has been increased by more than ten thousand numbers. This fact affords us no ordinary degree of pleasure, whilst it assures us that our labours have been approved.

Nearly up to the present period, our opportunities for acquiring information for all the recently introduced plants has been very limited, by reason of our engagements in the situation we held as Gardener, at Wortley Hall; but now being at liberty, we have every desired opportunity of obtaining information of their introduction, character, culture, &c. With this object in view we have spent the past autumn in, and around London, viewing collections of plants, obtaining information, and taking notes thereof. These particulars will be given in future numbers. So sensible are we of the advantages that are afforded by viewing collections in and around the Metropolis, (which is in the aggregate the great mart for newly introduced plants,) and of such information being embodied in the Cabinet, for the benefit of our Readers, that we intend immediately to take a residence in or near London, and purpose to devote that attention to the subject, which will, we are persuaded, prove both interesting and useful to our subscribers,

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and render the next Volume the best which has appeared, both for the cultivator of flowering plants in general, and the Florist whose attention is more particularly directed to a certain class of flowers. We pledge, that our utmost efforts shall be directed to effect the desired purpose.

We are under very great obligations to our friends who have, as heretofore, so liberally continued to favour us with communications for the present Volume. We again record our thanks for their kindness, and most respectfully solicit a continuance of their communications, to a work which is already so largely indebted to their favours, and which has materially contributed to their popularity, as to gain so unprecedented a circulation as the Floricultural Cabinet has obtained.

The Floricultural Cabinet having thus become the medium of circulating Floricultural Intelligence, to so great an extent, and our Readers, with us, being desirous to promote and extend its operations, we therefore respectfully solicit of each recommending our Publication to other persons, and whilst thus co-operating, the furtherance of the object will be promoted.

We again enter upon our Editorial labour for the next year with increased energy, and encouraged as to the future, by an increased number of friends.

Dorham, Nov. 22d, 1837,

THE FLORICULTURAL CABINET,

JANUARY 1st, 1837.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

DESCRIPTION OF A PLAN FOR A PLANT-STOVE AND GREENHOUSE, WITH A POTTING-SHED, &c. ATTACHED.

BY AN OLD SUBSCRIBER, PIMLICO, LONDON.

THE accompanying plans are designs for a Plant-Stove, Greenhouse, and a potting-house attached, for the use of amateur gardeners.

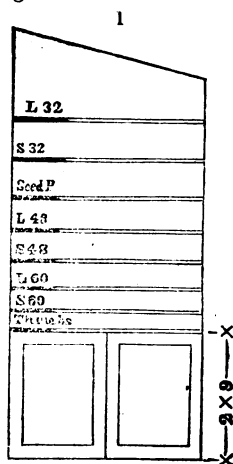
The first thing to be considered in the erection of a Greenhouse, &c., is the choice of a situation. The most proper will be, that which affords a full south aspect, and with the east and west sides open to these points of the compass.

The site of the building should be in a dry situation, for if not so placed, the warmth, or superior temperature of the house, will induce the moisture to rise out of the ground, and in cold seasons of the year will render it damp and chill. To prevent this, I should recommend that the entire site of the building be covered, a foot thick, with what is here called *Concrete*; that is a mixture of lime and gravel, or brick rubbish, in the proportion of about one of the former to three or four of the latter. The lime should be powdered and mixed dry with the other materials; then, before laying them upon the surface of the site, as much water should be added as will thoroughly moisten them. Two coats of this concrete, each being six inches thick, will effectually prevent the ascent of any moisture from the ground below.

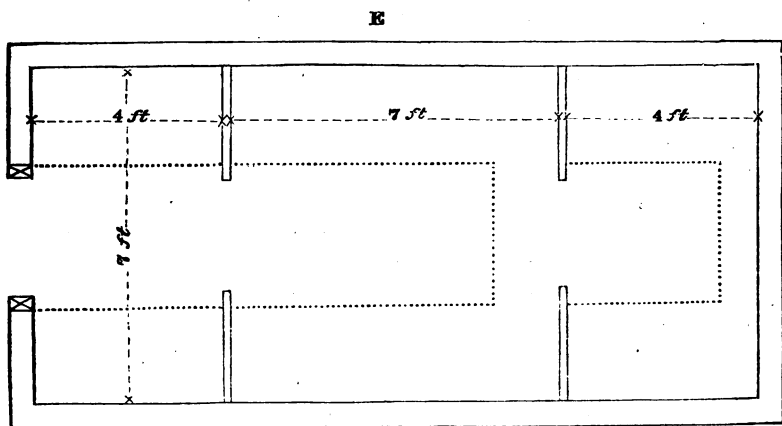
The next best aspect for a Greenhouse, will be on the east side of a house or other building which faces the south. In this situation the plants will have the advantage of the morning and mid-day sun. A Greenhouse constructed in any situation with a less favourable aspect than either of those described, will have but little chance of being suited to the growth of plants.

If the building be detached from any other, it will be necessary to provide separate means for warming it, and for this purpose, nothing can be better, or more economical, than the little furnace, &c., described in the *Floricultural Cabinet*, for March, 1836. If the ash-pit of the furnace was furnished with a good register door, the combustion of the fuel could be so managed as to continue the night through. The chimney should not be more than a foot long, with an elbow to pass through a six-inch wall—if longer, it will increase the draught too much. No doubt the gentleman who furnished the plan, &c., has provided the necessary appendages to his furnace.

The plans which I have sent you, consist, *first*, of a potting-room, four feet wide by seven feet long, (Fig. 1.) Through this to a greenhouse, seven feet square, (Fig 2.) And beyond this, descending two steps to the hothouse or Plant Stove, four feet wide. (Fig 3.) It will be perceived that the dimensions are small, but I think not too much so for the use of many amateur gardeners. Indeed some may desire smaller, in which case the potting-room and plant-stove need not form any part of the plan—or a portion of the three may be left out; say one side of each, leaving the remaining side and the gangway, which would, no doubt,



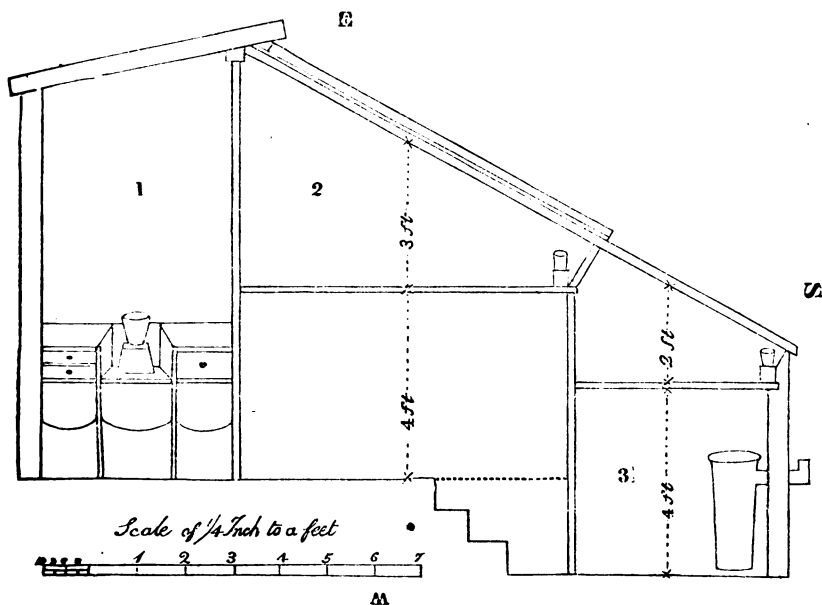
(Fig 2.)



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be quite sufficient for the use of many persons. A well arranged potting-room is a very necessary appendage to every greenhouse, and as there are very many operations to be performed in it, and much time spent there, it ought to be both conveniently and comfortably fitted up.

(Fig. 3.)



In the annexed plan, (Fig 3) one side of the potting-room is fitted up with a counter, in the top of which there is a well, sixteen inches square by eight inches deep. In the middle of this well is fixed a block of wood, eight inches square by six inches thick, leaving a space of four inches all round. The top of this block is two inches below that of the counter. The use of the block is to set the pots upon when potting, and the well round it is to hold the mould and keep it together. The space upon the top of the counter on each side of the well, is to place the pots upon as they are filled. Immediately under that part of the counter on the left of the well, are two drawers, one to hold tools, the other bass matting, cut into lengths of nine, fifteen, and twenty-four inches, to be ready for tying up plants. To the right of the well is a drawer for potsherds, for the use of drainage. The space under the drawers and well is divided into three bins—one for holding compost for annuals; another, compost for greenhouse plants; and a third, for any other compost tha

may be required. The bins must be made to run upon castors, so that they may be readily taken out to be filled with such composts as may be required. The wall above the back of the counter should be fitted up with wells to receive round sticks for plants, of the lengths of 6, 9, 12, 16, 20, 24, and 30 inches. And for square sticks for border flowers, (or standards,) in lengths of 18, 21, 27, 33, 42, 54, and 66 inches. The opposite side of the room is fitted up with a closet, the top of which is a counter, or work-bench. Against the wall, over the back of this counter is a range of shelves for garden pots and seed pans. Eight inches of the back of this counter, (which is two feet wide,) forms the bottom of the first shelf. Each shelf is broad enough to hold two pots, and they are so distant from each other, as to admit of two standing one within the other. A set of shelves so arranged, and the pots thus placed, afford ample space for as many pots as will be required by most amateurs.

I have lately adopted a new mode of affixing names to plants that are grown in pots, it is as follows :—Instead of using tallies, I have had a blank label painted on the rim of each of my pots. For pots, up to large sixties, one inch is quite sufficient ; for those above that size, one inch and a half. This affords ample space, either to write the name, or place a number. Either one or the other is done with a black-lead pencil, whilst the paint is newly laid on ; this does not rub or wash out. Two coats of paint are necessary to have them look well ; the last coat of paint should have less oil in it than the first, it will then be more easily written upon. These names will last as long as the pot, and is cheaper than any other description of labels. More time is required in preparing tallies, than is necessary in adopting my plan, and not near so neat or durable.

ARTICLE II.

ON RESTORING PLANTS WHICH HAVE BEEN AFFECTED BY FROST.—By MR. JACK FROST.

As the winter advances, a few remarks on the nature of rescuing 'Tender Plants from the effects of frost, by the application of cold water, may not be uninteresting to some of your readers. Every gardener is aware, that sprinkling cold water upon frozen plants has a tendency to restore them, but I am fully persuaded that, through ignorance of the nature of such application, it is seldom performed with that degree of success which it is capable. Heat, or caloric, exists in two states, viz., latent and perceptible ; when any two sub-

stances of different temperature, come in contact with each other, the temperature of the one is raised, and that of the other is lowered, until the two substances become equal, and if they are of equal density, the temperature will be a mean one—this is provided that neither of these substances undergo a change from solid to fluid, or from fluid to gaseous. In this case, a great quantity of perceptible heat will be consumed, and converted into latent heat; and if the change is from gaseous to fluid, or from fluid to solid, perceptible heat will be produced from the giving off of the latent. Thus, if equal weights of ice at 32, and water at 172, be mixed together, the whole of the ice will be melted, but the temperature of the mixture will be 32, so that 140 degrees are lost, or converted into latent heat.

If a tender plant that will not bear the frost, a *Pelargonium* for instance, be exposed to an atmosphere of 32, or exactly the freezing point, it will not be injured, but if the temperature sink below that point, say 28, under ordinary circumstances, when the least circulation of air is, the juices of the plant will be frozen, and it will be injured by the application of perceptible heat, in its rising from 28 to 32; but if the temperature when at 28 is raised by the freezing of water, when the act of freezing, by giving off latent heat, raises the temperature to the freezing point, the plant is uninjured. It follows, therefore, that the application of water should commence before there is any alteration in the temperature of the surrounding atmosphere, that is, in a morning before the sun rises, or before a fire is put on, and continued until the temperature is raised to the freezing point; but if the temperature of a greenhouse should be sunk to 28, and a slight syringing of water applied, only sufficient to raise the temperature, by the congelation of its particles to 30, a great injury will be sustained; if left to rise afterwards by perceptible heat to 32, as the agitation which will have taken place amongst the plants, will have more effectually frozen their juices. The water which is used, should not be much, if any, above the freezing point, or as cold as can be procured, so that the temperature of the plant should rise from 28 to 32, not by the application of a warmer substance so much as the converting of latent into perceptible heat. It is also of very great consequence that the leaves or no part of the plant should be moved when in a frozen state, as the cellular tissue, of which they are in a great measure composed, being of a very delicate texture, each cellule being filled with watery juice, which becomes frozen, the least bending of that part of the plant would rupture the membrane, which are only (and in many cases not quite) elastic enough to allow of the expansion of the water by freezing; it is, therefore, obvious that

instead of the water being laid on by a heavy rose, as I have sometimes seen, it should be done by a very fine syringe, like a shower of dew.

Being pressed for time, and not wishing to take up too much of your valuable pages, I have put the above ideas (the result of experience) in as condensed a shape as possible, but I hope not too much so to be understood.

ARTICLE III.—ON THE PROPAGATION OF CAPE HEATHS.

BY A PRACTICAL HEATH GROWER.

A GENUS so interesting, and we may say so long fashionable, must necessarily have early attracted the attention of plant cultivators; and from the profusion of flowers which most of the species produce, and their parts of generation being for the most part so perfect, we need not be surprised at the many hybrids which the care or curiosity of the cultivator have produced.

Heaths, like most other plants, propagate themselves from seed, although most of those cultivated in this country have hitherto originated from cuttings. A considerable portion of them ripen their seeds with us, and these are annual importations of seed from the Cape: particular care should therefore be taken in raising them, for there is a great probability of new varieties being produced, especially from seeds produced in the heath houses of this country.

Propagation from Seed.—The time we would recommend for sowing heath seeds is late in February, or early in March.—By sowing them at this season, we can always have the young plants sufficiently strong to stand the following winter. The size of the pots should be according to what quantity of seed you have to sow, as we consider it best to sow only one sort in a pot. The pots should be filled at least one half with broken pots, so as to have them well drained. The upper part should be filled to within one-fourth of an inch of the top with very sandy peat, and the surface made smooth. Upon the surface so prepared, the seeds should be thinly sown regularly all over it, and scarcely any covering put over them; this precaution is absolutely necessary from the circumstance that heath seeds are very small, and unable to push through a deep covering. The pots so sown should then be placed in a cold frame under glass, where they should remain; and if the weather should be very dry and much sun, they should be shaded with a mat. This shading should be continued constantly during sunshine, until the plants be from half an inch to an inch high, afterwards it should be gradually removed to harden them by degrees. For six or seven weeks the surface of the mould must never be allowed to become dry

but daily examined, at the end of which time the seeds may be expected to have vegetated; some seeds, of course, do not vegetate so soon as others, therefore the pots should still be carefully attended to; but after three months or little more, all hopes of their vegetation may be given up. As soon as the seeds begin to vegetate, the frame should have a little air admitted to prevent damp, and this should be increased as the young seedlings gain a little strength. Whenever the plants are sufficiently large to bear handling without injury, they should be potted out into small sized pots, well drained, always putting five or six into the same pot, particularly near the edge. In taking the young plants out of the seed-pot, great care is necessary that they be not injured; and when the whole (*or as many as is wanted*) is thus potted, they should be very carefully watered with a fine rose watering-pot, and then kept for ten days or a fortnight in a close shady place, after which they should be placed upon shelves in the heath-house or greenhouse, as near the glass as possible, that they may enjoy plenty of light and air. Here they should be shaded for a few hours in the heat of the day, if there happen to be much sun at the time. In this state they are to stand till the spring, and to be regularly watered, and kept free of damp, which at this season is their greatest enemy.

Propagation by Cuttings.—Cuttings of heaths may be put in at any time when the young wood is taken, after it has become sufficiently firm so as to prevent its damping off; many of the sorts will be in a proper state in the months of May, June, and July. The length of the cuttings must depend on the habit of the species of some of the free growing sorts, they may be about an inch and a half long; and from others that are of a more stunted growth, they may not exceed half an inch in length, in both cases they should be taken from the plant at the part where the young cutting starts from the old wood; strip off the leaves nearly half the length of the cutting, place the cutting on the nail of the thumb, and with a sharp knife cut off the small end close to the joint or place where it was pulled off the plant. The pots for the reception of the cuttings should be about eight inches in diameter at the mouths, they should be filled at least five inches with broken pots, the upper part of which should be of a smaller size than those below, over which should be placed a thin layer of fog (hypnum) to prevent the mould from working down among the draining. The pots should then be filled to within one inch of the mouth with very sandy peat, and the remainder filled to the level of the edge with fine sifted pit sand, and the whole pressed firmly down. After being watered, the pot is then

fit to receive the cuttings. When more than one sort is put into a pot, care should be taken to select the kinds as near of a habit as possible; unless this is attended to, some sorts will be found to strike root in a much shorter time than others, which makes it inconvenient when potting them out. When the pot is filled with cuttings, it should be well watered with a fine rose watering-pot, and placed in a close shady part of the stove as much away from fire heat as possible, and admitting no air near to the spot where the cutting pots are placed; likewise taking care never to allow the surface of the mould to become dry. Where there is not the convenience of a moist stove, an exhausted hotbed frame, where there is very little bottom heat, will be found to answer as well if not better. We do not consider bell-glasses at all necessary in any of the above-mentioned situations, unless it be for some sorts that are very difficult to strike, such as *Erica aurea*, *taxifolia*, &c. or where the situation in which they are placed is very dry and airy. If glasses are used, they will require to be wiped almost every day, to prevent any damp from injuring the cuttings. And when they have struck root, which will be easily known by their beginning to grow freely, the glasses should be removed gradually some time before they are potted out. When the cuttings are rooted, they should be potted out singly into the smallest sized pots, and afterwards treated in the same way as recommended for seedlings.

Young Heaths, either from seed or cuttings, should never be potted out later in the season than the beginning of September; if potted out after that period, they have not time to get established in the pots before the following winter. The soil best suited for the first potting should be one-half peat, and one-half sand, always taking care to drain the pots well with small pieces of broken pots or bricks.—Cuttings that are not rooted before the beginning of September, should be allowed to remain in the cutting-pots till the following March, after which they should be potted out, and heated in the same manner as already recommended.

ARTICLE IV.—ON THE CULTURE OF GERANIUMS.

BY MR. THOMAS APPLEBY,

Gardener to George Young, Esq. Sheaf House, near Sheffield.

HAVING promised you a paper on the Culture of Geraniums, I shall now endeavour to fulfil my engagement.

I employ the term "*Geranium*" as being most popular, though the proper botanical term is *Pelargonium*. English, *Stork's Bill*

(Pelargos. Stork) the fruit or seed having a beak like a Stork's bill.

As this is an extensive genus comprising nearly three hundred recorded species, and *five hundred* varieties, and as the same culture will not answer for them all, I find it necessary to divide it into three Species.

1. Species that have tuberous Roots.
2. Species that have not been hybridized.
3. Species that have been hybridized.

1. Species that have tuberous Roots.

These have thick fleshy tuberous roots, and some species have short stems, but the greater part have no stems, the leaves and flowers springing immediately from the roots. Some are exceedingly beautiful, as *P. longiflorum*, *niveum*, *Leeanum*, *undulaeflorum*, *roseum*, *astragalifolium*, *asarifolium*, *dipetalum*, &c. &c. All of them are pretty, and where there is convenience are well worthy of cultivation. Unfortunately, they require considerable care to cultivate them successfully, and hence they are much out of fashion, which I am sorry for, as I am pretty certain if they were better known, and oftener seen, they would be more in request.

A good greenhouse is the best situation for them during winter and spring; when in a growing state, they should be as near the glass as the arrangement of the house will admit. Plenty of air must be given on all favourable days. They should be frequently syringed with cold water, and be smoked with tobacco, whenever insects make their appearance.

During the growing season, they require watering pretty freely, but as soon as they have done flowering, and their leaves begin to turn yellow, decrease the quantity of water gradually; the best method to do this will be to water once in three days, then once a week, then once a fortnight, and lastly, once a month, by which time they will be completely at rest, when no water must be given to them till they begin to grow again, which may be looked for about February or March. When at rest, any situation where they can be kept moderately dry and cool, will do for them. Heat, light, and moisture not being necessary.

The best time to increase this section of Pelargoniums, is just before they begin to grow. Take off a small tuber or two where they can be spared from each plant, and pot them into as small pots as they can be placed just to cover them; place them in gentle heat, giving but little water until they begin to grow, when they may be removed among the established plants, and the ordinary culture given; they may also be increased by seed, which, however, they do not produce so freely as the shrubby species.

The best soil for those plants is an equal mixture of loam, peat soil, and dung ; they require also well draining, by placing plenty of broken potsherds at the bottom of each pot at least one inch thick.

2. Species that have not been hybridized.

Many of those species [also are rather difficult to cultivate, and in consequence are comparatively scarce ; but if the following directions are attended to, I trust the difficulty will be surmounted.

The species under this head are represented by *Pelargonium tricolor*, *bicolor*, *elatum*, *pendulum*, *tetragonum*, *fulgidum ovate*, *elegans*, &c. &c.

As they are all shrubby species, they require watering all the year, though always carefully, for if the soil gets sodden with water for a length of time, it is generally fatal to the plants. They also require greenhouse treatment during winter and spring. In summer they require placing out of doors in an open situation, screened from high winds, and set upon a bed of ashes so thick as to prevent worms from getting into the pots ; keep them clear of weeds, tied up neatly, and regularly watered during dry weather. Pot them into larger pots when they require it ; the best season for which operation is the month of April.

The compost I have found them to grow best in, is loam, peat earth, vegetable soil, and sand in equal parts.

To propagate them, take youngish cuttings off about the month of May ; fit some bell or small hand-glass to such a number of pots as may be required ; fill them half full of broken potsherds, rough bits of turf, or anything that will permit the water to pass off freely ; put in upon them as much of the compost as will fill the pots up to one inch of the rims, and fill up to the top with pure sand, then give a gentle watering, and insert the cuttings, giving more water to settle the sand close and firm to them. When pretty dry, cover them with the glasses, and place them in a gentle heat ; pot them off when struck, and keep them close and warm until they have struck root again ; then give them the ordinary treatment, as to situation, air, watering, potting, and so forth. Some of this section seed also, but not freely.

(To be concluded next month.)

ARTICLE V.

A FEW REMARKS ON THE MANAGEMENT OF THE GENUS CRINUM.

BY MR. HENRY SANSOME,

Gardener to the Rev. E. T. Halliday, North Town, Taunton, Somersetshire.

HAVING successfully cultivated many species of the beautiful genus *Crinum*, I am solicited by many of your readers to forward you my method of cultivation, which should you consider it worthy insertion in your valuable Magazine, it is at your disposal.

The greater part of this genus being inhabitants of hot countries require the stove in order to their success, and a liberal supply of water during the summer months; but during winter, the quantity of moisture should always be diminished, otherwise many of the bulbs will perish. I find, however, those with columnar stems, do not object to plenty of moisture at all times, as the habit of their leaves is more decidedly perennial; but it is by far the best, at all times, to rather underwater than overwater, and particularly those varieties which are of tender growth.

The compost I find the best for *Crinums* generally, is a rich yellow loam, rather of a friable texture; many cultivators of *Crinums* use peat in the compost, but I consider it very prejudicial; plenty of drainage in the pots I consider very essential, so that the plants may often receive the proper nourishment of fresh water—the size of the pots much depend on the habit of the bulb—but in order to bloom them well, they require plenty of pot room when in a healthy state. Whenever the youngest leaves of any *Crinum* with a sprenial bulb turn yellow and decay, the bulb should be allowed to go to rest for a short period; too much moisture in too low a temperature, will often produce this effect. In potting, the whole of the column should be kept above the soil, and all the obsolete coats, which are the base of decayed leaves, should be gradually stripped away, leaving the bulbous stem smooth and clean. I find nearly the whole genus to succeed the best when plunged up to the rims of the pots in troughs of sand, which are fixed over the flues; and during very hot weather, I find it very essential to inundate the troughs, but not to keep them constantly flooded; some of the species at the approach of winter, will require the pots to be turned on their sides, and to be kept perfectly dry. As soon as the plant has completely ceased to vegetate, shake the earth carefully from its bulb, pull off the decayed coats without making the bulb bleed, and repot it in dry pulverised loam, and let no water be given till the spring. My minimum heat is 65 Fahrenheits, and maximum from 80 to 90

If the preceding hints be strictly adhered to, success will follow. I have many other exotics doing equally as well as the *Crinums*, which, should you consider the same worth recording, I shall feel great pleasure in forwarding for insertion.

ARTICLE VII.—REMARKS ON THE CULTURE OF FUCHSIAS,

By Mr. William Barratt, St. John's Botanic Gardens, Wakefield.

By my former communications you will easily perceive, that I have paid some attention to that beautiful genus of plants, *Fuchsias*. I have this season added to my stock several very splendid varieties, and intend shortly to give you a continuation of the name, habit, and description of the new ones, to those of mine you have already published in the *Floricultural Cabinet*, for the last two years. The hint I wish to give you at present on *Fuchsias*, is, their arrangement in the beds, in order to produce, shall I say, one of the most splendid beds of beautiful and graceful flowering shrubs our gardens can boast of. The shape of bed most suitable is an oval one, say five feet across, and eight feet in length; plant in the middle of the bed some of the tallest growing kinds; in the next row round, some middle sized ones, weeping kinds; next row should be the several varieties of *Globe Fuchsias*; and another row dwarf kinds,—and then complete the bed with an edging of *Fuchsia reflexa*, and *Fuchsia microphylla*, planted alternately. The plants when planted, should be in the middle two to three feet high, and the other rows gradually less in height; the edging should be about four inches in height. Although they will not all exactly grow proportionately to their heights when planted, yet they will do something near it, and if planted out in April, or early in May, in rich soil, and a little peat mixed, the effect will surpass the expectation of most people.

ARTICLE VIII.—ON THE CULTURE OF HOYA CARNOSA,

BY S. W. E. SMITH, LYMINGTON, HANTS.

In a former Number of the *Cabinet*, “*Pedro*” wishes to know the treatment of the *Hoya carnosa*:—I have a beautiful plant, whose branches are nine feet long, and covered with large bunches of its lovely flowers, dropping their delicious juices upon other plants. It is trained across the greenhouse windows; is potted in a mixture of equal parts of sandy loam, yellow loam, and good manure. I keep it nearly dry all the winter, and in spring and summer water plentifully every two or three days with good manure water. I have struck

three young plants since May. I take off the cuttings at two joints, and insert them in the same compost, kept a little moist, shaded and stimulated by the heat of the cucumber frame. They can be struck from single leaves only, but I have never tried the experiment.

ARTICLE VIII.—ON THE CULTURE OF PINKS.

BY A PRACTICAL GARDENER.

THIS Flower, though it has nothing mysterious in its cultivation, has furnished some authors with so large a subject to write on, that they have composed whole Volumes on it. They have discovered wonders in every particular, even to the least action they imagined within themselves that nature wrought in these flowers, which has carried them to very prolix considerations thereon, and to reflections rather chimerical, than backed with the least appearance of truth.

Works of this nature in point of instructions, are of the number of those we call specious; and where the authors, by endeavouring to make out too plainly what they advance, are lost in imagining spaces, and puzzle themselves more and more.

To what purpose is it to make a wonder of a thing that is all natural, plain and easy? Can they believe, that the shortest way to instruct, is to descend into particulars, which, far from encouraging us to cultivate a flower, disgust us rather, and dishearten us from it? Besides that, these pretended rules are most of them merely visions, and arguments good for nothing but to swell a volume; nor can any advantage be gained from them: We, therefore, without further preface, will come at once to the point.

To follow the natural Order in the culture of Pinks, reason requires us to begin, by giving rules for the method of sowing them, since seed is the first principle of all vegetables.

Without going so much about the bush, to come to the method of sowing of Pinks, I say, we sow them in the naked earth upon hotbeds, or in pots of earth, or wood, in autumn, or in the month of March.

We sow them in the naked earth, having first traced out a bed according to the rules of gardening, and of the size we think fit; upon which, we scatter mould at least an inch thick, but, not till after we have made the earth as tangible and easy to work as possible.

If it be upon a hotbed, we need use no other ceremony; for the mould that is there will be enough of itself, having a sufficient quantity of salts to give this plant its requisite growth for planting.

But, if we make use of the pots of earth, or of wood, we must fill the bottom of them with a good kitchen-garden earth well sifted, and lay over it at least an inch thick of mould; this mixture pleases not some, who have written on this subject: but experience having more fully convinced me than all their empty discourses, I pretend to lay it down as an infallible rule.

The pots and garden-plots, where you intend to sow your pink-seed, being ordered in this manner, you may scatter it thinly over them, or sow it in rows drawn by the line, I mean as to the bed; for, as to that you sow in pots, it must always be sowed scatteringly, and never in rows. When this seed is sown, take care to cover it forthwith, either with a rake, or with your hand.

Having done this, water it immediately to the end of the mould, which is naturally light, may cleave the closer to it, better cherish the burgeon, and make it sooner take the requisite dispositions to become a plant of its kind. In order to the obliging it to do this, likewise take care to sow the seed in places exposed to the sun, and to carry the pots where you have sown any into such places also.

You should always have a good stock of pink-seed, that you may sow a great deal of it: For, a true florist should never give himself this trouble, but with a design to have some that are worth his raising: and it often happens, that among a thousand plants we have scarce three or four that are worth our care, though indeed we have sometimes more. When these plants are come up, they require to be frequently watered.

The Pinks sown in this manner, being come to a growth fit for planting, we prepare beds for them; along which, we draw drills by the line, four inches distance from one another; and observe the same in planting the Pinks.

The usual season to plant Pinks from the seed, is always about the end of March, or the beginning of April; and the Pinks thus put in the ground, grow till the next year without producing any flowers: but, after they have weathered out the winter in this condition, provided we have taken care to protect them from the severity of the frosts, by covering them with straw, we see them pullulate, and shoot forth slips from the foot; and from the midst of most of those slips, rise some stalks that bear flowers, and others that serve only for layers.

As soon as we have planted our Pinks from the seed, we take care to cover them in the day-time, with screens of straw laid ridge-wise over them, or with some piece of cloth stretched out over them in the same manner, to hinder the heat of the sun from coming too soon to

the roots, and over-heating them; which would much retard their taking root again. And, we must not neglect to cover them in this manner for the space of seven or eight days, unless the weather should be rainy, which would save us that trouble: we must also not forget to uncover them every evening, that they may have the benefit of the freshness of the night, which, in that season is very propitious to plants.

In the next month of the following year, when the Pinks are blown, we take a view of all that are planted, and have any flowers; and, if any of them have finer flowers than ordinary, we put some mark upon them, that we may have layers from them for increase, which is one of the three ways in use to multiply the kind. This first method of perpetuating Pinks, is properly speaking, a nursery.

Next to the seed, which is the first way of increasing the kinds of the Pink, comes that of the layers; to succeed wherein, you must follow the rules I am about to give you; but I presume that your Pinks are worth preserving, and that your slips come from valuable stocks.

If so, take a penknife, or some other instrument of like nature that cuts sharp, and, making choice among all the slips of the Pink, of that whose stem is strongest and fairest, make an incision in it through the middle of the nearest knot, to the foot of the plant, taking care that this incision go no farther than half, or, at most, than two-thirds of the knot: having done this, lay the slip gently down, fasten it with a little crooked stick, support it with another little stick, if you lay down your slips in the naked earth, for if it be in pots, the edges of them are sufficient to support them: then having covered with a little mould the part that is in the ground, water it well, and let it alone till it require your farther care.

If it be in the naked earth that you lay down your layers, you must for the first three days take care to cover them, to keep them from too much sun, which at first would do them mischief: and if it be in pots, set them for the like number of days in the shade, and bring them afterwards into an aspect, that will make them act more vigorously.

The layers ought to have taken root about the eighth or twelfth of September at latest; which is what you must take care to see: and if you find they have not, or that they have shot out only little fibres that can scarce be seen, you must get ready a bed of reasonable heat, and put in it the pots of the layers that have not yet taken root: this warmth is such a friend to the plants, that it never fails to actuate and give life to the parts that are disposed to shoot out the roots.

Indeed the layers that are in the naked earth have not this advantage; for which reason too, more of them die away than of those that are in the pots. but on the other hand, this does not always happen; and I myself have seen layers that had not retaken root within that time, lie in that condition in the naked earth all the winter, and take root towards the end of March, which is no small evidence against such as are over-cautious in the management of Pinks.

Among all the productions that a stock of a Pink produces, there are always some of them that are much less than the others; and these are they we leave to keep up the chief stock.

Now since the earth in which we set the layers is generally light, and by consequence unprovided of any large store of moisture; you must be careful to water the layers very often, and not to expose them to too great a heat.

I wonder why the name of suckers has been given to that part of the Pink we cut off, and that has no root; and why it was not rather called a slip, which is always taken for a small rootless branch of a plant, and which we thrust into the earth to make it take root: but in point of art we must always conform to the custom that has been long established: I say then that the third expedient made use of to multiply Pinks is by the suckers, which is performed in the following manner.

Consider your pink-stock, and having cast your eyes over it, resolve within yourself which suckers you will make use of: the middle sized are always the best: when you have done this, take your scissors, and cut off your suckers within two or three joints of the middle, which is the place whence the leaves spring out; and take care it have no more: when you have thus cut it off, slit it into four, by the lower end to the joint next that end, and from thence guide that incision to the second joint, and having taken off the tops of its leaves to within three inches of the middle of the sucker, throw it into the sun to make it wither a little: when you see it begin to languish, take it again and throw it into fresh water, and leave it there till you see it has recovered new vigour; then take it out of the water, and having your pots of earth or wood ready, and filled at the bottom with kitchen-garden earth, covered over with at least two inches of mould, thrust in your suckers to the second joint, press down the earth a little against the part you thrust in, water it plentifully, and set your suckers in the shade: do this, and I will answer for the success.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS;

Noticed since our last.

1. *BANKSIA OCCIDENTALIS*, West-Coast Banksia. (Bot. Mag., 3535.) Natural Order, Proteacea; Class, Tetrandria; Order, Monogynia. A very neat and handsome species of this very singular tribe of plants. Both foliage and flowers are pretty; the latter are of a dark red colour. *Banksia*, in honour of Sir Joseph Banks.

2. *BRASSAVOLA CORDATA*, Heart-lipped. Orchidaceæ; Gynandria; Monandria. (Bot. Reg., 1914.) There is nothing very striking in the flower of this species of Epiphyte. The petals are of a greenish-yellow colour, very narrow, and about one inch long; the labellum is half an inch long, and the same breadth, heart-shaped—white. The plant is a native of Brazil, and was imported from thence by Messrs. Loddiges, in whose collection it has bloomed this year. The species is very nearly allied to *B. nodosa*; the flowers are only half the size of that species, and having a heart-shaped labellum. *Brassavola*, in compliment to A. M. Brassavol, an Italian Botanist.

3. *BROUGHTONIA COCCINEA*, Crimson-Flowered. Orchidaceæ; Gynandria; Monandria. (Bot. Mag., 3536.) Synonyms, *Dendrobium sanguineum*; *Epidendrum sanguineum*; and *Broughtonia sanguinea*. The flowers of this species of orchideous plants, are said to be, by Dr. Hooker, the richest coloured of any of this splendid family of plants. It is but rare in the collections in this country, though introduced, from Jamaica, to Kew Gardens, 1793. The plant usually blooms from May to July. The flower stem rises about ten inches high, bearing a raceme of, from six to ten, very rich crimson coloured flowers, continuing in bloom a long time. Each flower is upwards of an inch across. It is a very desirable species, and well deserves a place in every collection. *Broughtonia*, in compliment to A. Broughton, a Botanical Author.

4. *CATLEYA INTERMEDIA*, VAR. *PALLIDA*, Pale-flowered. Orchidaceæ; Gynandria; Monandria. This species has bloomed in the collection of the London Horticultural Society. It is a native of Brazil. Mr. Tweedie remarks of it, "This is by far the handsomest of the tribe found in the neighbourhood of Buenos Ayres, and grows equally well on the sea-beaten rock, and the moss covered tree in the heart of the forest, and is to be found in bloom at all seasons. There are many varieties of it; their colour pink and crimson." The present variety is very beautiful. Each flower is about three inches across. The sepals and petals are of a pinkish-white colour. The labellum is three lobed, the centre one feathery at the summit, and terminating with large stripes and spots of a deep crimson, finely margined with white. The following fine species have been described by Dr. Lindley:—*Catleya bicolor*, native of Brazil; sepals and petals of a tawny colour; the labellum is of a bright purple and white. *C. coccinea*, native of Brazil, a very beautiful flowering species. The flowers are about three inches across, of a bright scarlet colour. The flower stems rise about three inches high. This latter circumstance connected with its brilliant coloured blossoms, render it a most striking and very desirable species. *C. Harrisonia*, a native of Brazil, producing from one to four flowers on a raceme. *C. maritima*, a native of Buenos Ayres, producing three flowers on a raceme, of a fine rose colour. *C. ovata*, a native of Brazil, very much resembling *C. labiata*. Messrs. Loddiges possess a fragrant species with crimson flowers, which was discovered by Mr. Schomburgh, in British Guiana.

5. *CRATÆGUS GLANDULOSA*, VAR. *MACRACANTHA*, Long spined glandular Hawthorn. (Bot. Reg., 1912.) Rosaceæ; Icosandria; Pentagynia. Synonyms, *C. glandulosa*; *C. macracantha*. A very fine variety of American Hawthorn, of a vigorous habit, producing a profusion of deep vermilion red berries, in clusters, and which make a very showy appearance. The foliage is of a dark green. The spines are from three to four inches long.

6. *DROSERA FILIFORMIS*, Narrow-leaved Sun-dew. Droseraceæ; Pentandria; Pentagynia; Synonym, *D. tenuifolia*. A native of New Jersey, where it was discovered by Mr. Macnab, and by him introduced to the Edinburgh Botanic Garden. It has bloomed in the Comely Bank Nursery, and in the stove at Dr. Reill's. The flower stalk rises eight or ten inches high, producing a raceme of ten or twelve flowers, rose coloured, each flower about half an inch across. *Drosera* from *drosos*, dew; referring to the clear fluid which exudes from the foliage, and appears as if covered with dew.

7. *EUTOCA WRANGELINA*; Baron Wrangel's Eutoca. (Brit. Flow. Gard., 362.) Hydrophyllæ; Pentandria; Monogynia. This pretty flowering annual is a native of New California, and has very recently been introduced into this country. It has bloomed, this summer, in the garden of A. B. Lambert, Esq., Boyton House, Wiltshire. The plant is of ready culture, growing freely in the open border, and blooming for several months, and has a peculiarly neat appearance. The cymose heads of pale-blue blossoms being showy; each blossom is about half an inch across. *Eutoca*, in compliment to Baron Wrangel, a Swedish Nobleman.

8. *GENISTA MONOSPERMA*, Single-seeded. (Bot. Reg., 1918.) Leguminosæ; Diadelphia; Decandria; Synonyms, *Genista monosperma*; *Spartium monospermum*. It grows wild in Sicily, Barbary, Greece, at Gibraltar close to the sea-beaten rocks, where, in February, it blooms in vast profusion. It is said to be one of the most deliciously fragrant blossomed shrubs yet discovered. The flowers are white. *Genista*, from *genu*, the knee; branches being flexible like the knee-joint.

9. *ISOPAGON BAXTERI*, Mr. Baxter's. Proteacæ; Tetrandria; Monogynia. (Bot. Mag., 3539.) A native of New Holland, from whence it was sent to the Edinburgh Botanic Garden, in 1830; it has bloomed in the greenhouse at that place. The foliage is very handsome, much resembling *Grevillia acanthifolia*. The heads of flowers are rose coloured, with darkish tips. The plant usually grows about two feet high. It is a pretty greenhouse shrub.

10. *MALVA MUNROANA*, Mr. Munroe's Mallow. (Bot. Mag., 3537.) Malvacæ; Monadelphia; Polyandria. It was introduced into this country by the late Mr. Douglas, who discovered it growing on the barren plains of the Columbia, in North-West America. It will bloom freely when grown in the open air in this country, and a warm and sheltered situation be selected for it; it will then bloom from July to October. If cultivated in the greenhouse, it blooms from May. Each flower is near an inch across, of a pale rose colour.

11. *NECTAROSCORDUM SICULUM*, Sicilian Honey-Garlic. (Bot. Reg., 1913.) Liliacæ; Hexandria; Monogynia; Synonym, *Allium siculum*. A hardy bulbous plant, discovered in the shady woods of Sicily; nearly thirty flowers are produced in each umbel; they are of a brown, purple, rose, and white intermixed, each flower is more than half an inch across; it is more interesting than showy. *Nectaroscordum*, from *nectar*, honey; and *skordon*, garlic.

12. *ORNITHOGALUM CONICUM*. Pure-white flowered Star of Bethlehem. (Bot. Mag., 3538.) Asphodeleæ; Hexandria; Monogynia. A native of the Cape of Good Hope, from whence, Baron Ludwig sent bulbs to the Glasgow Botanic Garden, in 1835; the same year it bloomed in the greenhouse. The flower scape rises about one foot high, terminated by a raceme of flowers, at first conical, afterwards more elongated. The flowers are of a pure white, each near two inches across, making a showy appearance. *Ornithogalum*, from *ornis*, a bird; and *galu*, milk. The plant producing much when bruised.

13. *PHLOMIS ARMENIACA*. Armenian Jerusalem Sage. Labiatæ; Didynamia; Angiospermia. (Brit. Flow. Gard., 364.) A hardy herbaceous perennial plant, with flower stems rising about a foot high, producing numerous fine yellow blossoms, which have a neat and elegant appearance, being large showy. The plant was introduced into this country in 1834, from Armenia, where it was found growing on dry stony hills. It well deserves a place in the flower garden. It is grown in the Chelsea Botanic Garden. *Phlomis*, from *Phlogmos*, a flame; the down used for candle wicks.

14. *PRESCOTTIA COLORANS*, Purplish Prescottia. (Bot. Reg., 1916.) Orchidacæ; Gynandria; Monandria. A stove herbaceous orchideous plant from Brazil, and imported by Messrs. Loddiges. The flowers are produced in a dense

manner, upon a spike of six or eight inches high, something in the way of the common Plantain—they are of a yellowish-green. *Prescottia*, in compliment to John Prescott, Esq., of St. Petersburg, a celebrated Botanist.

15 *RATIBIDA COLUMNARIS*, var. *PULCHERRIMA*, Painted-rayed. (Brit. Flow. Gard., 361.) Compositæ; Syngenesia; Polygamia Frustranea; Synonyms, *R. sulcata*; *Rudbeckia columnaris*; *R. Tagetes*. The late Mr. Drummond discovered this hardy perennial plant growing in Texas, from whence he sent seeds into this country. It is found frequently growing on the margins of rivers throughout the western regions of North America. The present showy variety has been raised by Mr. Miller of the Bristol Nursery. The flower stems rise from two to three feet high, each crowned with a splendid flower, three inches across. The disk of the flower has a large portion of a fine velvety crimson and brown colour; the exterior part of a fine yellow. Altogether it is a very splendid flowering, and deserves a place in every flower garden.

16 *SISYRINCHIUM GRAMINIFOLIUM*, var. *PUMILUM*, Dwarf grass-leaved. (Bot. Reg., 1915.) Iridaceæ; Monadelphia; Triandria. This very neat and beautiful flowering plant was discovered on the mountains near Valparaiso and Concepcion; a plant of it has been sent to Robert Mangles, Esq., Whitmore Lodge, Summing Hill, Berkshire; in the very select collection of that gentleman it bloomed in May 1836. The flower stems rise near six inches high, producing a profusion of flowers, each of which is near an inch across, of a pretty yellow, with a deep purple spot at the base of each petal. The plant requires protection during winter in a cool frame or greenhouse. *Sisyrinchium*, from *Sesurichion*; an old Greek name for the Iris *Sisyrinchium*.

17 *STACKHOUSIA MONOGYNIA*, Pink-tipped. (Bot. Reg., 1917.) Stackhousiaceæ; Pentandria; Monogynia. A half hardy perennial herbaceous plant, a native of New Zealand, from whence it was sent by Mr. James Backhouse to the York Nursery. The flowers are produced in a dense spike. The petals are very narrow. Each flower is nearly half an inch across. The tips of the spikes are of a bright pink, but when the blossoms expand they are pure white. *Stackhousia*, in honour of the late John Stackhouse, Esq., F.L.S., of Pendarvis, in Cornwall.

18 *VERBENA LAMBERTIA*, var. *ROSEA*. Drummond's Pink Flowered Verbena. (Brit. Flow. Gard., 363.) Verbenaceæ; Didynamia; Angiospermia. This very pretty flowering variety was discovered by the late Mr. Drummond, in Texas, and is cultivated in this country under the name of *V. Drummondii*; the plant appears to be only a variety of *V. Lamberti*. The flower stem rises to half a yard high, terminating in a spike, from three to six inches long, of fragrant flowers, which are pale rose coloured. When grown vigorously it is a very handsome variety. It delights in a fresh loamy soil, well enriched with manure or leaf mould. The plant is quite hardy and easily increased by slips. It may be obtained at most of the principal Nursery Establishments.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE CULTURE, &c. OF CACTUSES.—In the month of August, 1835, I addressed a Query to the Editor or Correspondents of the *Floricultural Cabinet*, requesting information as to the name and treatment of a number of small Cacti, which I then described thus. They were raised from seeds, and originally appeared with flat leaves like the *Cactus speciosa*, but have since made shoots which are both hexagonal and octagonal, covered with hairs, each shoot having the appearance of being twisted, they are now three years old. The specific name and mode of treatment to make them bloom freely, is what I request information upon, and shall feel much obliged to any one who will kindly answer me.

ON THE CULTURE OF CYCLAMENS.—A subscriber to the *Cabinet* would feel himself extremely obliged if any correspondent would inform him of the best method of growing the Sweet Scented Cyclamen. I purchased several roots in bloom three years ago, but have not had the pleasure of witnessing a single bloom on them since. By giving this assertion in your next number, you will still further oblige yours, &c.

ALPHA.

December 13th, 1836.

ON PANSIES.—Can you or any of your Subscribers, inform me where, near Sheffield, I can procure the following Pansies, and at what price? viz. Royal Crimson, Iver Beauty, Rollinson's Princess Victoria, and Jane Ann's Favourite. Near Sheffield, Dec. 18th, 1836.

AN ADMIRER OF THE CABINET.

ON SOWING SEEDS OF *ANOMATHECA CRUENTA*, &c.—A Subscriber has been anxiously awaiting an answer in your *Cabinet* to the question asked in the October publication, relative to the management of the Seeds of the *Anomatheca cruenta*, and if likely to blossom the same year? Perhaps Mr. Harrison himself would be kind enough to give an answer in his next Number, as the season may soon be too late to take advantage of the knowledge required.

December 6th, 1836.

The seeds should be sown as early as there may be the convenience of giving them a warm and moist temperature, as a cucumber or melon frame, or pine stove. The pot should have an inch deep or upwards of drainage, in a rich, light, sandy soil; we have found the plants to grow very vigorously. When the plants are strong enough to take up out of the seed-pot, which will be when about two inches high, let that be carefully done to retain all the fibrous roots, insert one plant into a small sixty-sized pot, replacing the plants into the frame, to assist in re-establishing them; when they appear to be striking root afresh, give an increase of air, so that the foliage does not draw up weakly. In a short time they will require pots a size larger. When this is done, they may be placed in a cooler department, as a greenhouse or frame, where they can be protected till the middle of May, when, with balls entire, they may be planted in the open border, where they will bloom the same season. We had some which bloomed from the middle of July to the end of September. The situation was open to the sun, and sheltered from the East, West, and North winds.

CONDUCTOR.

ON THE DAHLIA.—Has any of the readers of the *Cabinet* tried the experiment of cutting the roots of two Dahlias, each into two parts, and then joining the two sorts together, that is, one portion of each kind being secured to a portion of the other. If this has been tried, I should be obliged by being informed what the result was in affecting the colour, &c. of the flowers.

C. NEVILL.

ORNAMENTAL CREEPERS, &c.—I should be very much obliged, if some reader of the *Cabinet* would give a list of Ornamental Creepers, or climbing plants, suited to train against a wall, trellis, pillar, or arbour. A list of greenhouse, and one of hardy kinds, will confer a great kindness on

FLORA.

Notts, Dec. 13th, 1836.

ANSWERS.

ON DESTROYING THE WIRE-WORM.—In answer to an inquiry respecting Wire-Worms, contained in the October Number of the *Floricultural Cabinet*, I beg to send the following Extract from Kirby and Spence's Introduction to Entomology. "A very simple and effectual remedy for that destructive insect, the Wire-Worm, was mentioned to me by Sir Joseph Banks.—He recommended that slices of potatoes stuck upon oceneers, should be buried near the seeds sown, examined every day, and the Wire-Worms, which collect upon them in great numbers, destroyed."

ON COMPETITION IN EXHIBITING TULIPS, &c.—In replying to the Query which was forwarded to us by Mr. Figgans, and inserted in the November Number, page 260, we give the following as our opinion. Supposing that distinct prizes are offered as follows:—The first Rose 20s.; second do. 15s.; third do. 10s.; and fourth do. 5s. In this case, A would be entitled to 20s. and C to 5s. In the same manner A would be entitled to 10s. in Biblémans, and 10s. in Bizards; and C to 15s. in Biblémans, and 15s. in Bizards. A would thus obtain 40s. and C 35s. From which it is evident that A has the advantage over C, in the first prizes, viz. 20 to 5, whilst C has the advantage in the second prizes over A of 30 to 20. If A and C were to compete where there were prizes only given to firsts and seconds, then the first would be obtained by A; but if no thirds were offered prizes, A would not be entitled for the third Biblémans, or third Bizards; C would not be entitled for the fourth Rose, but would claim the prize for the second Bib. and second Biz. Thus A would get the first prize, and C the seconds.

(None of our Correspondents having replied to Mr. Figgans's Query, and an answer being desired in the December Number, we have inserted our opinion of A and C's claims in such a competition.)

CONDUCTOR.

ON THE CULTURE OF CACTUSES.—A Correspondent requesting instructions on the Culture of the Cactus, I herewith send you some practical observations taken from the Horticultural Transactions, they are part of an excellent communication by Mr. Green, gardener to Sir Edward Antrobus, Bart.—"The compost that I use," observes Mr. Green, "is an equal quantity of light turfy loam, and pigeon's dung, and one-third sheep's dung, exposing the mixture one year to the influence of the summer's sun and winter frost to mellow. When wanted for use, I add one-third of sandy peat, in both cases mixing them well together. I grow the young plants from February to July, in the forcing flower-house kept from 55° to 60° Fahr. I afterwards remove them to a shelf in an airy situation in the greenhouse, exposed to the mid-day sun, giving them plenty of air and little water. The plants that I want to flower the following September, are placed in the forcing-house the first week in December, giving them very little water for the first ten days, and gradually increasing the water as the plants advance in growth. About the 1st of February I stop all the young shoots, which soon become well ripened; from this time I decrease the quantity of water until they become quite dry, in order to throw the plants into a state of rest. In the beginning of March, I replace them in a cold shady situation in the greenhouse, treating them as before. For plants to flower in August, I place a quantity more in the forcing-house the first week in January, treating them the same as those for September; only they are put to rest in the greenhouse a fortnight later, and replaced in the forcing-house one week sooner.—The first flowering plants are put in the forcing-house the end of January, and will come in flower about the middle of March. When these plants have done flowering, and are removed from the drawing-room, or greenhouse, I prune out most of the old shoots that have flowered, so that the plants are furnished regularly with young shoots for flowering the ensuing year; these plants are also placed in the forcing-house for ten days, to ripen the young wood and dry up the moisture, and are then put to rest in the greenhouse as usual: such plants will flower a second time in October. Others put in the forcing-house the middle of February will flower about the end of April; if then pruned, and dried, and put to rest as before, they will flower a second time in November, and so on in proportion. I repot them at all seasons whenever the plants may require it, always

observing to keep the pots well drained with potsherds, that the moisture may pass off readily. This process may be considered troublesome, but superior growth, and abundance of flowers, amply repay the care bestowed. By the above treatment, *C. speciosus* and *Jenkinsoni* have generally produced from ninety to a hundred fine expanded flowers, at one year old. The plants that I brought to the Society (May 21, 1833,) were about two years old; the *C. speciosus* bore two hundred flowers, *C. speciosissimus* seventy-two, *C. Jenkinsoni* one hundred and ninety-four. I prefer growing them in wooden tubs, with nice stakes fixed to the tub, to the usual mode of supporting them by sticks driven into the ball of the plant, which I consider injures the fibre, and makes the plant appear unsightly."

REMARKS.

ON THE CABINET NUMBERS, &c.—The *Floricultural Cabinet* is unquestionably the most valuable Publication to the Amateur, as well as the practical Gardener, both rich and poor, its pages being open for questions and answers, which are both amusing and instructive. I have frequently seen questions in it which would seem at first sight but of little utility if answered, but in themselves of great importance, especially to the young beginner, and pleasing to all who have the pleasure of perusing it. The low price at which the *Cabinet* is charged, places it within the reach of every one who is anxious for improvement in the beautiful study of Horticulture. It is to be regretted that the Proprietor did not, when the *Cabinet* was first established, see the likelihood of so useful a Work rising to its present dignity, and have many more Numbers printed than was called for, as a friend of mine being anxious to possess the whole of the Numbers now published can only obtain 26 of them. We are informed by the Bookseller (who supplies me with the Number monthly) that the Numbers above named cannot yet be obtained, nor can he say whether they will be obtainable or not. You will therefore greatly oblige me and my friend by informing us in your next Number, how and when we are likely to get them.* We have not yet been favoured, as suggested by one of your correspondents, with Plates and description of Grasses. I feel confident that it would be of very great utility, as so little is known about Grasses, when so much is required, if a Double-Number were to be issued until a few descriptions on Grasses with plates were given. I do not think that any one of your numerous Subscribers would object to it, for myself I would rather give one shilling per Number, and have two plates and descriptions, when we could also have some of our good old-fashioned flowers represented.

Can any of your Subscribers inform me of a Grass or any other aquatic plant that would grow in an iron tank about 12 feet by 9, where lukewarm water is always running through it.

ESCHSCHOLTZIA.

Liverpool, December 14th, 1836.

ON NEW OR HANDSOME FLOWERING PLANTS.—*Tropæolum brachysema*.—Last month we noticed, at page 295, a new species of *Tropæolum*, the specific name of which we did not know. We have recently obtained information that it had been named by Dr. Lindley *T. brachysema*, to whom a flowering specimen had been sent, by G. C. Rasleigh, Esq. Hyde Lodge, Winchester, Hants. Mr. Rasleigh has received a considerable collection of roots, bulbs, and seeds, from Valparaiso, among which was seed of the *Tropæolum*. It has bloomed in the collection of that gentleman, flowering very freely, of a pretty yellow, slightly streaked with a dark colour inside. The blossoms hanging in abundant clusters add very much to its beauty. The foliage is exactly like the *T. tricolorum*. The flowers are in form more like the common *Nasturtium* of the gardens, each flower being rather more than half an inch across. It is a very neat and

* Complete sets of the *Cabinet*, from No. 1 up to the present one may now be had of Messrs WHITTAKER & Co. We had no idea, at the commencement of the *Cabinet*, that the demand would be more than one quarter of what it has reached, or we should have been better prepared to meet the wishes of our friends. The increased demand each month, and getting up back Numbers, has required great expense and exertions in the operations. We have much pleasure in announcing that we can now, and in future, meet the demand. CONDUCTOR.

pretty species, well deserving a place in every greenhouse. Plants of it have been sent to Mr. Thompson and Mr. Knight, King's Road, Chelsea, and Mr. Ingram, Southampton. Mr. Rasleigh has also flowered some other handsome *Tropæolums*, differing in some particulars from *T. tricolorum*, and *T. elegans*. The collection contained some new specimens of *Phycella*, as well as a very sweet, night-scented, small flower, which is supposed to be *Leucocoryne odorata*.

Gardoquia multiflora, Many flowered.—A very neat and handsome flowering species, requiring a greenhouse temperature. It is a shrubby plant, growing from a foot to half a yard high. It has very much the appearance of a neat plant of the *Fuchsias*. The flowers are produced in abundance, very similar to the *Epacris grandiflora*, they are about the same size and form, of a pretty rosy crimson colour. The foliage is fragrant. The plant deserves a place in every greenho use. It strikes freely, and may soon be had of most nurserymen.

Sedum Siboldi.—A new species from China, which requires to be grown in the greenhouse. The plant blooms profusely, and its fine scarlet flowers make a very showy appearance. It is propagated easily, and may soon be had of most of the public nurserymen.

Eutaxia pungens.—This is a very neat handsome and abundant blooming species, recently sent from New Holland, and is now spreading in the London Nurseries. It is a shrubby plant, growing from two to three feet high. The flowers are yellow with an orange red centre. The plant deserves a place in every greenhouse. It blooms freely during summer.

Clervodendrum speciosissimum, Showy flowered.—This fine flowering shrubby plant has very recently been introduced into this country, and is one of the most showy plants for the conservatory or greenhouse. The plant grows to four or five feet high, and produces numerous large spreading panicles of fine rich scarlet flowers. Each blossom is two inches across. It may be had of the public nurserymen, and it well deserves a place in every conservatory or greenhouse. We were informed, the plant had been introduced into this country by Messrs. Lucombe, Prince & Co. Nurserymen, Exeter.

Bignonia venusta.—A most splendid flowering climber, which ought to be in every stove, warm conservatory, or greenhouse. When the plant has got established, it blooms profusely, its large clusters of flowers, near twenty in each, of a fine orange colour, being exceedingly showy. Each trumpet-shaped blossom is near three inches long. If the roots of the plant have the advantage of a bark pit, or otherwise wormed, it greatly promotes its vigour, and is the means of bringing it early into bloom. Plants may be had of most public nursery establishments.

ON ORCHIDÆ.—For what purpose can the world have been adorned with these Orchideous plants? To man or animals they are scarcely ever of any known use. No honey is secreted by their flowers; neither poison, medicine, nor food, are collected in the recesses of their stems; and their very seeds seem unfit for feeding even the smallest bird. We can scarcely suppose them provided for the purification of the unwholesome atmosphere of the forest recesses in which they delight, for their organization is that of plants whose leaves perform their vital actions too slowly to effect such a purpose. For what then can they have been formed, unless to delight the sense of man, to gratify his eye by their gay colours and fantastic forms, and to shew the inexhaustible fertility of that creative power which we recognise every where in Nature. If this be not the object of those countless changes of form and colour which the *Orchis* tribe exhibits, we shall scarcely comprehend why in this very genus *Oncidium* the lip bears at its base a collection of tubercles which are not only different in every species, but so strangely varied, that

“Eye of newt, and toe of frog,”

are the least singular of the forms that lie cowering in the bosom of their petals; the heads of unknown animals, reptiles of unheard-of figures, coils of snakes rising as if to dart upon the curious observer, may all be seen in the blossoms of the various species, whose very flowers may be likened to unearthly insects on the wing.

ON NUMEROUS SPECIES OF LUPINES.—In the Synopsis of the Genus *Lupinus*, by Dr. J. G. Agardh, that gentleman has described *seventy-six* certain species, and adverted to seven other kinds of which very little is known.

ON CHINESE GARDENING.—The style of Chinese gardening, like other arts, is peculiar; they have no idea of spacious landscape; there is a littleness in all their designs; they have a desire for a small part of every the grandest features of nature: lakes, where a mackerel would be puzzled to turn; rocks which a man may carry away under his arm; aged trees fifteen inches high; and thick forests of pines composed of *equisetum*. Of whatever extent the ground may be, it is all divided into little squares, parallelograms, or irregular areas of a few square yards or perches. These compartments are surrounded by low brick walls, having a flat coping, on which are placed flowering plants, in fine glazed porcelain pots. The paths are often composed of flat stones, not two of which are on the same level, if near together. A great deal of trellis-work are in the gardens, either appearing like the remains of former fences, or as coverings of naked walls. If a ditch or artificial hollow be in the garden, it must be crossed by a semi-circle arch of four or five feet span. Their little tanks of water are not considered beautiful until they are completely covered with ducks' meat, (*Leinnia*); in short, there are so many childish freaks which constitute the beauty of a Chinese garden, that it is astonishing so clever and civilised a people can be gratified with such puerile efforts of unnatural taste. As far, however, as their collections of flowering plants decorate a garden, the assemblage is enchanting. Their *Magnolias*, *Bombaces*, *Azaleas*, *Camellias*, *Ixoras*, *Pæonies*, &c., not to mention the great variety of herbaceous and aquatic plants natural to the country, are indeed magnificent; indeed one of the finest traits of the Chinese character is their fondness for flowers.

REFERENCE TO PLATE.

1. *Marsh's Paragon Dahlia*.—This very handsome kind was raised by Mr. Marsh, Gardener to Sir Bethell Codrington, Bart. The flowers are of a very perfect form, cupped petals. It is a profuse bloomer, comes into bloom early, and has always produced double blossoms; the flowers stand well above the foliage; the plant grows three feet high. We purchased the stock of Mr. Marsh last season. A considerable quantity of very vigorous plants will be offered for sale early this spring.

2. *Gardoquia Hookeri*, Dr. Hooker's. *Gardoquia*; *Labiata*; *Didynamia*; *Gymnospermia*. This very neat and handsome flowering plant is a native of South Carolina, from whence it was sent, along with many other valuable seeds, by Mr. Gordon, to Mr. Charlwood, Seedsman, Tavistock-Street, Covent Garden, London. During the last summer, we saw it in the very select collection of plants at William Bows, Esq., Broughton, near Manchester; it was cultivated in a warm part of the greenhouse, and by the very successful mode of culture the plants had, they produced a vast profusion of blossom, and had a most handsome appearance. The plant is shrubby, grows from half a yard to two feet high, bushy, blooming from April to November. The very worthy gardener, under whose management every thing appears to be cultivated in a state of perfection, entitling him to very superior merit, informed us, that to have healthy plants, young ones must be annually raised, (cuttings striking very easily,) and they may be constantly kept in an excited state. The pots had a free drainage, and in a mixture of sandy peat and loamy soil, it flourished in the manner we stated. We understood that the plant was very liable to injury from over-waterings, that especial attention to avoid this was necessary. *Gardoquia*, in honour of D. Diego Gardoquia, Minister of Finance under Charles 4th, King of Spain, a lover of Botany, who greatly assisted in the publication of the *Flora Peruviana*.

3. *Verbena Tweediana*, Mr. Tweedies'. This very handsome flowering plant has bloomed in Scotland during the last summer, where it attracted much notice. Several of our friends who saw it, one of whom says, that it very far exceeds that admirable little plant *V. melindres*, (*chamedrifolia*), the racemes of flowers being much larger, as also the flowers, and of a fine crimson red colour. The plant grows erect, from half a yard to two feet high, blooming very freely. It deserves a place in every greenhouse and flower garden. It strikes readily by cuttings, and grows vigorously in a rich loamy soil.



Abbott's Triumphant



Wood's superb Pink



*Wood's
Duke of Manchester Picotee*



THE FLORICULTURAL CABINET,

FEBRUARY 1st, 1837.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF THE NEAPOLITAN VIOLET.

BY MR. ERRINGTON, OULTON PARK, CHESHIRE.

I BEG to hand you the following remarks, on the culture of that lovely winter flower the Neapolitan Violet, for insertion in your excellent Magazine, if you consider it worth your notice; for I do not remember having seen anything of the kind in that work from its commencement.

The first part of the process is to obtain early runners, to affect which it is of course necessary to have a bed or patch of established plants in hand—such being the case, commence your operations early in April, by sifting some very fine vegetable mould all over them; of course not choking the plants, but merely to form a receptacle for the fibres of the young runners. In the course of a month, by due attention to watering when dry, &c., (a process particularly necessary,) fine early young runners may be obtained. Prepare them a bed or beds on an open and airy border, (south if possible,) and if the soil be somewhat solid so much, the better as the object is not so much to get an excessively luxuriant, as an early and stiff plant. On this solid sub-soil (if I may so term it) raise a bed six inches above the common level, with soil composed as nearly as possible, of equal parts of fresh loam, inclining to lightness and vegetable soil; by which latter I mean about equal parts of bog or heath soil, and finely decomposed leaf mould.

On this bed prick them out at about eight inches apart each way, and all that remains to be done, while they are in this situation, is to push their cultivation on as fast as possible, by complete attention to watering and weeding. If the weather prove excessively sunny for days together, shading at any period through the summer will be highly advantageous. One thing must be here remarked,—to

wards July they will be getting strong, and of course producing abundance of strong runners: as soon as these become thick they must be thinned with the knife, once or twice; in doing which, let all those that appear long-jointed be cut entirely away, and all such as appear short-jointed and stiff, be retained: leaving finally from three to six, not more, of these stiff and staunch adherents. In the first week of September, if the cultivation has been done justice to, they will be fit to remove into their winter quarters, for what is termed forcing. As to the making up of the frame, fancy must dictate that, as there are so many modes, and each good of its kind: I will, however, just observe by the way, that they are very impatient of heat and moisture, and are full as likely to be "killed by kindness" as lost by neglect. In this, as in most of our gardening operations, nature must be our principal guide. I have tried a small bottom heat of leaves, and have found it to answer well; but this of course requires great caution to watering, and giving air, as they are liable to damp off in winter: however, I am convinced that if the runners be obtained and cultivated early they will be best on a cool bottom, say an old melon bed that stood high enough to receive a good body of lining through the winter: in which case the old bed may be pierced through with abundance of holes, both for the escape of superfluous moisture, and for the sake of the heat of the linings penetrating the bed. The soil they are to be planted in should be prepared as follows:—about three inches thick for the bottom, of the surface of an old cucumber bed, taking as much rotten dung, as loam or soil: on this place about three or four inches more of the compost before directed, only adding a good sprinkling of sharp sand, and a little very rotten dung to it. The plants may now be removed, in doing which, take care to obtain as large balls of earth as is possible, the less check they receive the better; and when the frame is planted give the whole a good watering. All that can be done hereafter, is to keep on the lights in all rainy and inclement weather; never suffering them to have a drop of rain, and giving them all the air possible without starving them. As the early frosts begin, let the plants be regularly matted up at nights; as the cold increases, add more mats towards December and through severe weather plenty of hay or litter: I need scarcely add, be sure to keep the frost out. Let it be well remembered that they are very impatient of confined damp, and also of heat:—from 50 to 58 degrees is plenty for them. The slugs are mortal enemies to the blossoms; therefore be sure to keep a few cabbage leaves in the frame, and pick them over regularly every evening or morning. By these means this lovely winter flower may be obtained in the very highest perfection from October to May.

ARTICLE II.—ON FORCING ROSES, &c.

By J. R. Willis, Gardener to the Rev. W. P. Thomas, Drakes Place, Wellington.

As I see no answer to the desire of your correspondent, "A Devonian," in Vol. iv, page 75, on Forcing Roses, I once more intrude on the pages of your valuable work, the *Floricultural Cabinet*.

In giving an account of the plan I adopted with the Roses I had under my care last season, I must observe that it answered my most sanguine expectations; I am, therefore, following the same mode of treatment this present one. I hope at the same time it will meet the wishes of "A Devonian."

I pot the plants the latter part of August in the compost and same sized pots I recommended in Vol. ii, page 3 of this work. Having but one plant stove, which is about 40 feet long by 15 feet wide, I take a common cucumber frame, putting some rotten tan into it, in which I plunge the pots, (but I should have named, that before I put them into the frame, they are pruned back to two or three eyes,) I then put a strong lining of hot dung, as recommended by Mr. Wood, in Vol. ii; and put on the lights directly, having some very thick reed mats made for the purpose, I cover the lights with them; they remain covered in this manner about a fortnight when the buds will all have broken. I take the mats off and let them have all the light I can so as to bring them to their colour, which they will attain in a few days. I then remove them to the coldest end of the plant stove, which I keep now at 75 or 80 degrees; I keep them to this situation about a week, when I remove them on a trellis to the front of the house, towards the end where the heat first enters, where I keep them moderately moist at the roots, and occasionally syringe the tops. It is almost needless to add, that the time for putting them into the frame can only be governed by the time they are required to be in bloom, which I find to be about six or seven weeks from the time of putting them in the frame. In answer to the question, "Whether it is possible to have fine forced Roses late in December and January?" I reply, that I have forced them so as to have them in bloom at Christmas, but the flowers were never so fine, neither do I find them to bloom so freely as those which come in flower in February and March; in fact I have had them in February and March little inferior to those in the open air. With respect to whether "They will bear removing to a conservatory after the blossoms are produced, &c.?" I answer, they will remain in flower much longer than if kept in the stove, but I find that the buds that were just formed when they were taken from the stove will turn yellow and drop off; they are not so liable to fall when kept in a warm room in the house; I have had them in the house for more than a week, and then removed them back to the plant stove, and opened the buds already formed, but they certainly feel a check, as they were not so fine as the first. In answer to the question concerning "Moss

and Province Roses?" They both force remarkable well with me, and produce a great number of flowers; the only difference I show them in treatment from the others, is, they are syringed rather oftener than the other sorts. The Roses I principally force, are those here named, they may not be considered the best by some, as I am aware that the different growers have their fancy sorts for the purpose of forcing Moss crimson, Moss scarlet, Province, Crimson perpetual, Gloire de jardins, Lee's perpetual blush, Yorkshire province, Indica Ochroleua Noisette, Smith's New Yellow Noisette, Charles 10th—These are the sorts I most admire for the purpose of forcing, not forgetting the one recommended by Mr. Wood, viz., Rose du Roi. With regard to "The height the Dog Rose stock should be, to show the flowers to advantage?" I should say, in answer, that the height in some measure depends on a persons own fancy, but, however, my opinion is, the dwarfer it is the better.

The Persian Lilac should be taken up or repotted as soon as the leaves are off, and potted in a sandy loam, in pots sufficiently large to contain their roots when potted; put them in some convenient and sheltered place, until the latter part of January, then put them in the stove, and keep them moderately moist. *Hydrangea hortensis* may be forced just in the same manner.

The greatest beauties we can add to a conservatory in spring, are, in my opinion, Rhododendrons, Azaleas, and Kalmias. Those I force are Rhododendron ponticum, Do. Smithii, Do. Cunninghamii, Do. arboreum, Do. Catawbience. *Kalmia latifolia*. Azalea Indica alba, Do. phoenicea, Do. Smithii, Do. pink, Do. blush, Do. white, Do. yellow. These should be carefully taken up with good balls, disturbing the roots as little as possible, and put them in pots large enough to contain the balls. The time I pot them is in November—I do not recommend their being brought into the forcing-house until after Christmas, when they will begin to push directly; the only treatment I use, is keeping them moist and syringing the buds.

Dec. 6th, 1836.

ARTICLE III.—ON DESTROYING THE WIREWORM.

BY C. S., PLUMSTED HALL.

A "Subscriber and Constant Reader" mentions in the *Floricultural Cabinet* for October, 1836, that a friend of his had lost, in one season, an extensive collection of Dahlias owing to the attacks of wireworms. The same circumstance is very prevalent in those counties where the cultivation of hops are general; and the method adopted by a very clever grower of these plants is, to have five or six slices of raw potatoes placed among the loose mould which surrounds the plant you wish to preserve. In a short time the slices of potatoe will be quite filled with the worms, when it is advisable to employ women or children to take up the slices of potatoe and put down fresh ones.

In the hop ground I saw, one of the slices of potatoe alone contained twenty wireworms, and by examining one slice of potatoe it will be easily discovered when they require to be replaced.

ARTICLE IV.—ON THE CULTURE OF THE PRIMULA SINENSIS.

By Mr. Plant, Gardener to S. H. Haslam, Esq., Chesham, Bury.

It may not be unacceptable to some portion of the readers of your *Floricultural Cabinet*, to be informed of a mode of treatment in order to bloom the *Primula Sinensis* in its best perfection, and at its proper season.

The compost I make use of consists of rich light loam and peat soil in equal parts.

The seed is sown in the month of May, in a pan lightly covered and placed in a cold frame. When the plants have formed their two first rough leaves they are transplanted singly into pots of sixties; when their roots have filled these, they are then removed into forty-eights, and afterwards into thirty-twos, keeping them in the same situation, and finally into twenty-fours when removing them into the greenhouse in October. It is necessary in all the pottings to give a good drainage of broken crocks or cinders.

The *Primula Sinensis* and its varieties, treated after this manner, form a desirable addition to the greenhouse and conservatory during the winter and spring months, afterwards they may be planted into the open border or thrown away, as it is requisite in order to have good blooming plants to sow the seed every year.

ARTICLE V.—ON CULTIVATING THE ERYTHROLENA CONSPICUA

BY SCARLET THISTLE.

My pleasure ground is laid out with small clumps of different shapes, one clump is planted with white dahlias, another with yellow and so on. I am fully convinced that by having each clump planted in this manner, the superiority of one flower over the other is more fully seen and the effect more striking.

The clump next to the one planted with white Dahlias I had planted with *Erythrolena conspicua*, and I do assure you the effect was most beautiful. The plant is of very easy culture; I recommend the seed to be sown under a hand-glass in March, and when the plants are three or four inches high, to be placed singly into pots, and kept in a frame until the middle of May, when they may be turned out of the pots into the clump. The soil I find them to thrive the best in, is a rich loam. I have had plants this season from five to seven feet high, and completely covered with fine large bright scarlet flowers. Should you consider this worth noticing, you shall hear from me again.

ARTICLE VI.

ON THE TREATMENT OF THE ERITHRYNA LAURIFOLIA.

BY G. H. S.

THE *Erythrina laurifolia* was introduced into Britain in the year 1800, from South America, and is generally treated as an inhabitant of the stove and greenhouse only, which on trial is found to grow and flower most beautiful when planted out in the open air with other exotics from the same country; using a compost of peat, sandy loam, and decayed tree leaves, well chopped and incorporated together, but not sifted. If planted in spring, head it down almost to the surface of the ground, and place a hand-glass over it, keeping it close until all the buds are broke, then admit plenty of air in favourable weather; on the hand-glass being removed, the young shoots must be well secured, in case of wind, as they are very apt to break, if not supported. If treated as above, it will have a fine green foliage intermixed with its beautiful scarlet blossoms from July to September. When it has done flowering, it may be headed down and covered with tree leaves for the winter, or all the shoots tied together, and then rolled up with hay-bands, and in spring treated as before directed.

ARTICLE VII.—ON THE CULTURE OF THE AURICULA.

By James Sheppherd, Nursery Seedsman and Florist, Winchester.

I HAVE for the last ten years practised growing Auriculas, and followed Mr. Emerton's plan, laid down in his Treatise, for several years; but loosing so many plants, year after year, convinces me that his compost is too hot, which induced me, three years ago, to try a fresh compost, and it proved very successful. My plants this year completely cover the pots with leaves, which have from twelve to twenty-two leaves, with trusses, from nine to twenty-two pips.

Good soil and good management, as Mr. Emerton observes, is not easily beaten, although I differ with him in many respects; as for instance, I do not use exactly the same soil, nor keep my plants under glasses in the winter, neither keep them in the same situation when in bloom. The situation in which I keep my plants for the four winter months, viz., October, November, December, and January, is under a shed, in a full south aspect, where they can enjoy all the sun. Observe to keep them tolerably dry; the beginning of February I top-dress them and put them under glasses, but giving them all the air I possibly can, and also to keep the frost from them; I manage to keep them as warm at night as in the day, for this being their growing season, they like to be kept at a regular temperature, if not, they will become more or less chilled, and not bloom free. The situation in which I like to keep them, when in bloom, is in an east aspect, letting them have the sun till 8 o'clock in the morning, after which, I shade

them with very thin mats till the sun is gone from them: if put to a north aspect, and some of the pips not quite blown out, they will be chilled and never open free. Remember I do not keep them too warm when in this situation, neither let the cold nights chill them. If auriculas have too much water they will become *sickly* and turn yellow, which was the case with four or five of mine last spring in letting them have too much rain. The compost must be rich, light, and sweet, and when you are potting your plants never press the mould too hard about the roots, nor on any consideration over pot them, as this family of plants, like many others, will not thrive well until the roots touch the pot.

Before I changed my compost I lost from ten to fifteen plants every year, but for the last three years I have been very successful and only lost one, Taylor's Ploughboy,—which by some neglect the old soil had not been removed from it, and had diseased the plant in the trunk, just under the surface. About the latter end of May, when the bloom is over, I remove them to their summer situation, which is shady, as they thrive better in the shade in the summer months, until the end of September, but by no means under the droppings of trees. Observe, I take off all the offsets when I top-dress them, which I consider the best time, as the auricula at this season (February) makes considerable progress, and whether the offsets have roots or not I take them off, provided they are large enough. I plant four offsets in pots called forty-eights, in which they will take root very freely, not letting them have too much sun; in about two months they will be fit to pot off in the same size pot above named.

I herewith send you some new varieties of seedling auriculas of my own rearing, which I trust will be found worthy of your notice.

If the lovers of auriculas should like any of No. 1, 2, and 3, they can be obtained by taking the three varieties at 18s. 6d. per plant, on application, post-paid.

Plants will be ready to send out in August next. I beg to state that the above sorts are free growers, and most excellent trussers, from fifteen to twenty-two pips.

[The blooms were so damaged in conveying as to prevent us taking any drawing of them.—CONDUCTOR.]

(Continued from page 16.)

ARTICLE VIII.—ON THE CULTURE OF PINKS.

BY A PRACTICAL GARDENER.

BE not impatient about your suckers taking root; but if by the tenth or twelfth of September, you see that nature has not had strength enough to operate in them, put your pots into hotbeds, and be careful to cover them with glass-bells.

Never did any author enlarge so much upon nothing, as he that wrote the culture of Pinks has done upon this article: he has carefully enumerated every particular, even to the minutest circumstance of things, that he imagined only might happen: in short, he has forgot nothing, yet all he says is, for the most part, empty words that prove nothing.

To make a mixture of earth proper for Pinks, that naturally love the cool; take one third of good kitchen-garden earth, one third and a half of mould, and half a third of yellow earth; sift them well and mix them all together. When this composition is made, take pots of a middle size, which are wider at top than at bottom, so that whenever you think fit, you may the more easily take your Pinks out of the pots: fill them with this earth; press it down a little, to hinder it from sinking down too much of itself, as it otherwise would: and when you have filled them thus with the earth to within an inch or better of the brim, fill them up quite with mould taken from an hotbed.

Having done this, go to your suckers, take up the little hook that holds them fast, and if you find they have taken root, divide them from their stocks, by cutting them with a knife or some such like instrument, as near as you possibly can to their stalk: take care that the two shanks of your suckers, which are the lower parts of them that spread themselves abroad, by reason of the incision which was made on them, and to which the little fibres adhere, be always of a like length; gnaw off the ends of the leaves. This is a method which has been hitherto constantly practised.

Having exactly followed these instructions, take it for a certain rule, that the true time to plant the suckers, is towards the beginning of October; and when you have divided them from their stocks, and have nothing more to do, but to put them in pots, observe the following method of doing it:

Take your suckers, that are prepared in the manner I named, hold one of them in your left hand; with your fore-finger make in the middle of your pot a hole large and deep enough to contain your sucker; put it in, and fill up the hole; press down the earth upon the suckers, water them, and when you have planted them all in this manner, carry your pots into the shade: leave them there for ten or twelve days, which is the usual time in which we suppose them to have retaken root.

The safest way to govern plants is, always to have regard to their constitution, and to the places from whence they draw their first extraction. The Pink comes from a temperate climate, and accordingly desires but a moderate sun. Therefore, when the ten days the suckers have been in shade are over, take them from thence, and place them in an easterly aspect, which agrees with them the best of any.

This Pink is not very sensible of cold, therefore, be not afraid to let it weather out the first frosts: we see a great many endure the

winter in the naked earth, and come to no damage. Not that I advise you to leave your pots exposed in this manner; that would be too much neglecting a flower that deserves a particular esteem.

As soon, therefore, as the frosts begin to pinch, let all your pots be carried into your conservatory, if you have one; and if not into a chamber or some other place, where they may be sheltered from the rough violence of the air.

If the winter be mild, and consequently the earth in the pots that are in the conservatory should grow too dry, it will not be amiss to give them a little water, drawn fresh from the well, or some other place of that nature: but if it freeze, or if there be any likelihood of frost, you must not do so on any account; for to water them, would do them more harm than good.

There is no animal more dangerous to Pinks than rats; you must, therefore, be very watchful that they do them no mischief, and make use of all the means which have hitherto been invented to destroy them.

There can be no fixed time prescribed to take the Pinks out of the conservatory, for the end of the winter must determine it; though about Easter we see the florists generally set them out in the air, but in a place of shelter from the hoar-frosts, to which the season is still subject, and where the sun never comes: for plants, that have been as it were imprisoned, must be accustomed by degrees to endure the open air, otherwise they will be suffocated by it, and die away.

If there be any leaves on the Pinks, that seem to be rotten, you must be careful to take them off, which must be done by pulling, or cutting them off as close to the stem as you possibly can.

When the Pinks have been for some little time in a place like that I have described, you must carry them to another, where they will thrive, and grow better; that is to say, you must set them in the easterly aspect, which is favourable to them; though I have seen some exposed to the south, that have done very well, and that grew in a short time by the help of frequent waterings; but the water ought always to be warmed by the sun.

These waterings should never be given them till after sun-set; and always with a little watering-pot, that the water falling gently on them like rain, may not beat down the earth: as to the quantity of the water, it must always be left to the discretion of the florist, to give them as much or as little as he thinks fit.

When the pinks begin to spindle, they require a little more care from him that looks after them, than they did before: for we then take little hazel-sticks, of about the size of the little finger, the bark of them being stript off, set them at the foot of each spindle, and tie them with a small rush as fast as they rise up: for without this prop, the stem, which is naturally weak, would not be able to support the flowers it produces, but would be apt to grow very crooked.

The stock of a pink sometimes shoots out mounters from all its slips, which is an inconvenience we ought carefully to avoid: therefore carefully take off some of them, by cutting the stalk to the second joint.

The frequent waterings given to pinks, and that beat down the earth, together with the heat of the sun that dries and hardens it, obliges a florist to turn up the surface from time to time: and we may affirm, that each time he does so, he will find a visible advantage by it: after which tillage, we always give it some new mould taken from a hot-bed, as well for neatness sake, as for the benefit the pink gives by the addition of new salts, which penetrate into the plant, whenever we water it.

The pink is a plant that requires more assistance from art than any other; it often produces buds we wish it did not: and when we perceive this hurtful fruitfulness, we must not omit to ease it of the burthen, as much as we judge convenient; especially when two grow aside one another, we must be sure to take away one of them: for in the affair of pinks, we ought to be more desirous of beauty, than of the great number of flowers.

The buds we take away are always those that grow nearest the foot of the pink; and we must shew our judgment in this operation; that is to say, we must take away from those that want nourishment, than from those which grow naturally large, on which we are sometimes obliged to leave all of them, because they are subject to burst.

In regard to the Pinks that burst, we must, when we have any that are subject to do so, tie the bud, and shift it a little on the side where it bellies out: the large and short bud, we ought mostly to suspect.

When the Pinks are in flower, we should consider whether nature has disposed all things in a manner, so just in all its proportions that we may say, this is a beautiful Pink; and in defect hereof, we must comb such as require it; the manner of which is as follows:—

Wash your hands clean, and wipe them very dry, take your ill-shaped pink and bend down the top of the husk, shifting it a little; take notice which leaves of your Pink are out of order, and with your hands dispose them in the most beautiful order you can: after this you will see the difference there will be between the first disposition and the second.

All persons that are truly curious, when they have any Pinks that burst, and which by reason of that accident cannot keep their flowers in due order, make use of a piece of pasteboard, cut round, and a hole made in middle, not larger than the size of the pink, and this they place just under the leaves of the flower, which they put into their due order: this gives it a beautiful aspect, and makes it grow to a wonderful size.

The Pinks that are in pots are generally set upon boards, that are laid upon trestles, and when they are placed to advantage, they claim the admiration of all that see them.

When your Pinks are in flower, whether they grow in the naked earth or in pots, you must take care to cover them; for their flower is so delicate, that the sun withers it away in little time, and the rains will take off all their lustre: therefore, they that raise up Pinks, must make use of what expedients they think fit, to preserve them from these injuries.

There are some, who, to make the flowers of their Pinks last the longer, carry them into the shade: this is a very good method, and may be followed if you think fit.

The pink is a plant, that from its root shoots out leaves, that are long, narrow, hard, thick, and of a bluish green; from the middle of which grow stalks that are hard, round, and knotty from space to space; at the top of which are flowers of many leaves and various colours, supported by a long and pipe-like cup. From the middle of the cup rises up a chive, that in time becomes a cylindric and membranaceous head, opening at the top, wrapped up in the cup itself, and filled with a small flat seed, of a black colour, and that comes to maturity, by setting the pink in the same place where it was when it began to blow.

When you would furnish yourself with a stock of pink-seed, you must always make choice of the most fruitful, and the most inclined to bear seed; which a florist, who applies himself ever so little to the culture of his pinks, will easily distinguish.

After having given rules for the culture of pinks, as also the description of them; and told how and in what place the seed is formed, I believe it will be proper to set down in this place the qualities that render it a beautiful flower; to the end that he who cultivates it, may know perfectly well on what he bestows his labour.

A pink is reckoned beautiful when it is large, has a great many leaves, and forms as it were a sort of little dome.

When it is of a clear white, without any mixture of carnation; when its leaves are even at the edges, and not jagged, all of them round, and not sharp-pointed.

The more variety of colours a pink has, the more it is esteemed; especially when the colours are well divided, and not in the least imbibed.

The most beautiful variegation that can be on a pink, is always that which reaches from the bottom to the top of the flower; and when besides these advantages that please the eye, Nature has favoured it with a regular disposition of its leaves; or that we, in defect thereof, have ranked in due order ourselves. A pink, in which all these qualities meet, deserves the labour we bestow in cultivating it; and we have reason to be fond of it, on account of its excellence.

THE DISEASE OF PINKS.—Pinks are subject to certain diseases which are easier to prevent than cure: they are rottenness, and the white disease.

The rottenness is prevented by avoiding to give too much water, and by cutting to the quick the part that is unsound, before it is quite tainted, and covering it over with a dry and light earth.

In regard to the white disease, we preserve this flower, by not keeping it too dry; by not placing it in a situation that will be to hurtful to it: and in short, by preserving it from the fogs, which infect it to that degree, that they throw it into a disease which kills it without remedy.

Take care not to place your pinks in any plots of the garden, where there are other flowers of the large kind: whose beds filled with them, afford in the season a very beautiful prospect: but it is always best to raise them in pots, to adorn an amphitheatre made on purpose to receive them.

ARTICLE IX.—REMARKS UPON GREENHOUSE SPECIES OF ACACIA

BY A FOREMAN OF A LONDON NURSERY.

THE volumes of the *Floricultural Cabinet* contain numerous valuable articles on the treatment of various flowering plants, but it appears to me that those individuals who have favoured us with the excellent remarks on each kind, have generally directed their attention to such plants as required a lengthy article upon them. For such I am sure the readers of the *Cabinet* are much indebted, but there are many, very many, beautiful flowering plants which have not been noticed, they highly merit it; and though no lengthy remarks are necessary, I think it would be equally acceptable if a few short observations upon them, as to the particulars of the plant, its culture, so as to keep it healthy, and bloom profusely, &c., were given. I believe many of the readers of the *Cabinet* have hesitated to communicate useful information, merely because the observations they had to make upon a plant, or plants being few, they would not therefore be interesting or useful, but I am sure the more simple the means, the more condensed the remarks, the more acceptable to us. I hope therefore those readers who have practical knowledge of any beautiful flowering plant, hardy or tender, will favour us with information. To commence with, I herewith send a few remarks upon two genera of plants of which no notice has been taken in the *Cabinet*, they are the greenhouse Acacias, and Mimosas. I have included the two, because many of the kinds formerly Acacias have been transferred to the Mimosas, and others of the Mimosas to the Acacias. And considerable confusion prevails through the country as to their identity. But whether they are now designated Acacias, Mimosas, Ingas, &c., there is a natural identity in the class of plants and I refer to them as a whole. The plants are profuse bloomers, very showy, most of the kinds produce yellow flowers, some white and others pink: most of them are very fragrant, as the well-known *Mimosa paradoxa* or *Acacia armata*.

They generally produce their lovely blossoms during the early spring months, hailing the return of that delightful season with presenting an array of beauty, and affording a delightful gale of perfume. The greater portion of this ornamental tribe of plants are from New Holland. They are generally very free growers and of easy culture. I find them to grow vigorously in equal parts of good rich loam and peat, having a quantity of Calais sand mixed therewith. I use a good portion of drainage in the pots, and give the plants plenty of pot room. This latter attention is necessary as the plants root so very rapidly. In a soil as above described and giving a good drainage, a very free supply of water is required, I always take care to let the soil be dry before I give a fresh supply of water. I shift the plants into larger pots immediately they have done blooming, they then push freely those young shoots which are the blooming ones for next season.

I would add a list of kinds here, but I think it unnecessary to do so, as each kind are graceful in form, and beautiful in flower, and merit a place in every greenhouse or conservatory.

Many of the kinds strike root freely from cuttings, taking the young shoots, I strike them in sandy loam, the greater portion being sand, and place them where they get a little bottom peat. Those kinds which I find do not root readily from cuttings, I have struck from portions of the roots, inserting them, &c., as done to shoots, leaving out the top part of each about an inch. I have never failed to raise plants of any of the sorts by this method. I always cut the lower portion of the root in a transverse direction close under an eye. If this plan of striking was adopted with most kinds of greenhouse plants, it would be found to succeed better than by taking shoots. The roots not being liable to damp off as the shoots often do. I shall continue to send a few remarks upon plants for each successive number of the *Cabinet*, if it meet the approval of the conductor.

ARTICLE X.—ON THE TREATMENT OF THE HOYA CARNOSA.

BY PRIMULA SCOTICA.

NOT having observed any reply to your Correspondent's question respecting the treatment of the Hoya Carnosa, I send my gardener's mode of treatment, which always succeeds admirably. He uses a mixture of sand and heath mould, and during the colder part of the year, keeps the pots in the hothouse. Those plants of the Hoya Carnosa that are propagated by planting the leaf, are long in producing any stem; and it is better to procure a good offset, and lay it spirally in a pot containing the above mixture, when a fine plant is rapidly produced. This waxen-flowered plant shows to advantage trained along a rafter, or against a trellis, and requires the free access of air and light.

ARTICLE XI.

ON THE REPOTTING OF GREENHOUSE PLANTS, &c.,

BY A PRACTICAL GARDENER IN STAFFORDSHIRE.

ON account of the variety and number of greenhouse plants, it is rather difficult to reduce them to any one certain rule; not only because they are less expensive, and consequently more cultivated, but also that our milder climates, are found to produce plants in greater abundance than the Torrid Zones.

Therefore the business of shifting is, in general, a weighty concern. To be enabled to execute this business with regularity, every preparation should be previously made, and the different sorts of mould laid up in a shed; as well to keep them from becoming too wet for use by sudden showers, as from getting too dry by the action of the sun, or arid winds which may be expected at this season. Also on wet days (if nothing more urgent is to be done) let a quantity of old broken pots be made small, to serve for draining to the tenderer sorts; the coarse siftings of peat being sufficient for the stronger growing kinds.

Things being thus in readiness about the middle, or end of May, the general shifting should be commenced: in order to which, let some of the plants be carried to the shed, and carefully proceeded with in the manner already directed for hot-house plants; observing, above all things, not to injure the roots, but gently to loosen them with the hand in such manner, that the mat of roots, which is generally formed on the outside, may not remain entire; whereby they will soon strike into the fresh mould that encompasses them.

Green house plants for the most part require a considerable share of pot room, as many of them are very free growers; but still great caution is necessary, to avoid over potting the tender weak growing kinds. When shifted, let them be tied up if requisite, and well watered. It will be also necessary to shade them for a few days from the influence of the sun and winds, until they are perfectly established in the fresh mould. Any dead or ill-grown parts can now be with propriety cut away, so as to give the heads a regular neat appearance: by observing this process, it will be found, that though a temporary check may be the consequence, they will soon flourish and do much credit to the operator by their healthy appearance and progress.

It being mentioned that shelter, and occasional shade is necessary for a few days when they are first placed in the greenhouse, I must add, that should the weather prove dark, and cloudy, this work may be omitted: however, if hot sunny weather ensue, it will be indispensably necessary; and also, to water them twice, or thrice a day when first potted, observing to wet the leaves as little as possible.

By the middle of June, it will be time to think of preparing the out-door departments, in which it is intended the plants should stand during the summer months.

The most eligible situations for this purpose are, the north aspect of vacant walls, or hedges, where they will be a little shaded from the noonday sun, or between rows of close hedges particularly planted, and solely appropriated to this purpose. I can by no means espouse, or recommend the practice, of setting them close under the shade or branches of large trees; as the plants are thereby inevitably drawn into a weak state in a few weeks, and those who adopt such situations, are not unfrequently under the disagreeable necessity of throwing away many, of perhaps their most rare plants, every Autumn; and even those that remain will have a bad unsightly appearance. Indeed shelter from the winds, is the great desideratum, to prevent their being upset, for in my opinion, most greenhouse plants are fond of the warmth of the sun, except when recently potted, provided their roots are kept moderately moist. Let us look for a moment to the arid mountains of the Cape, and there we shall find them exposed to its full glare, and perhaps without water for months: their roots however can penetrate deeper there than they can possibly do in pots, so that life is preserved, and as soon as the periodical rains commence, they resume in a very little time their verdure, and, "breathe their balmy fragrance all around."

Some gardeners' practice is to plunge them amongst the shrubs and flowers of the pleasure ground; this answers pretty well with the strong growing kinds; such as myrtles, geraniums, coronillas, &c., old plants or supernumeraries that will not be wanted to house in the autumn: and even has a very pretty effect when judiciously done; but it will by no means do for the tenderer species. Therefore, upon the whole, the most unexceptionable situations, are such as at the same time afford a moderate portion of shade, and are so situated, as to break the force of those strong gales, which frequently blow in the summer, and early autumn months, and yet allow that free circulation of air so necessary to the well-being of plants in general, and at all seasons. Having fixed on the place they are to stand, it must be thoroughly cleared from weeds, and the hedges, if any, neatly clipped. It should then be well rolled, to make it perfectly firm and level, over it a layer of good lime, slacked, and made into the consistency of thick white wash, should be poured, and allowed to soak into the surface: this I recommend as being a strong preventative against worms getting into the pots; which is always injurious to the plants. When this is dry, let about an inch of finely sifted coal-ashes, be regularly laid on, and firmly rolled a second time.

Being thus prepared, the plants may be brought out and set regularly and level on the surface; in whatever form may best suit the situation, or the fancy of the proprietor, even on this subject a few observations may not be unnecessary.

Therefore in placing them, it should be endeavoured to give them a loose, easy, but yet judicious manner; which is by far more handsome

than the stiff, shorn-like front, admired by some : any plants that may be in flower, should be placed in conspicuous situations, but not so as to make the clump look in the least tawdry ; simplicity and neatness are the principal objects to be considered, in this, as well as the other decorations of the flower garden : another circumstance to be remembered, is, that now as their summer growth commences, it will be necessary to allow each plant, sufficient room to spread according to its natural habit of growing ; and also to be careful, that the curious tender sorts, (which are frequently the most valuable,) are not crowded by the large free growing kinds. Indeed they should be set, as well as heaths, in a separate clump as they lose a good deal of their interest, by being confounded with large shewy plants that attract the eye, at the first glance, from the more delicate and minute, but to many not less attractive species.

Should the weather prove dry when they are thus set in their clumps, they must be freely watered ; particularly in the afternoon, when the sun has nearly ran his course. A good washing also with an engine, or syringe, at times in the absence of the sun, will be of considerable service to them ; but if any individual plant should at any time become too wet, let it be placed apart from the rest, and not watered again until it evidently requires it : this is a circumstance which I shall have occasion to mention hereafter ; all that is necessary now, for a few weeks, is to pick off dead or withered leaves, and weeds of every description ; and a regular attention to the directions already given.

PART II.

LIST OF NEW AND RARE PLANTS.

Noticed since our last.

1. *BURLINGTONIA CANDIDA*, Snow-white flowered. (Bot. Reg. 1927.) Natural Order, Orchidaceæ; Linnean Class, Gynandria; Order, Monandria; Synonym, *Rodriguezia candida*. A truly delicate and handsome flowering species of this most interesting tribe of plants. It has been introduced from Demerara, by R. Bateman, Esq., in whose superb collection it bloomed in 1835. The flowers are produced upon a pendulous raceme, that which bloomed at Mr. Bateman's produced five flowers. Each blossom is about two inches long, of a snow-white transparency, having the tip slightly suffused with a sulphur colour. The genus consists of five charming species, viz., *B. candida*; *B. fragrans*, the flowers are produced upon an upright raceme which are delightfully fragrant, having the perfume of Jonquils or Narsisus's. It is a native of Brazil, where it is found growing upon the loftiest branches of the Cedrela tree, and the flowers are produced in vast profusion, their fragrance is so powerful as to give a delightful perfume to a considerable extent around it. *B. rigida*, found in Brazil, producing its flowers in a long, stiff, erect raceme, the summit of which is terminated by a cluster of five or six blossoms, of a largish size, they have the delightful fragrance of violets. *B. rubescens*, a native of Peru, where it is found growing upon the trunk of the Calabash tree, the flowers are produced upon an upright raceme, of a beautiful white, spotted with rose colour. They are produced most abundantly, and in blossom nearly all the year. *B. venusta*, a native of Brazil, producing its lovely flowers upon a pendulous raceme. They are of a snowy-white, slightly suffused with pink. The plant blooms so profusely as to be literally loaded, bending beneath the heavy clusters. *Burlingtonia*, named in compliment to the Countess of Burlington.

2. *DELPHINIUM TENUISSIMUM*, slender-branched (Brit. Flow. Gard., 366.) Ranunculaceæ; Polyandria Trigynia; Synonym, *D. divaricatum*. A hardy annual *Larkspur*, a native of Greece, near Athens. And has bloomed in the Chelsea Botanic Garden. The plant grows about a foot high, much branched, producing medium sized blossoms of a rich purple colour. *Delphinium* from *Delphin*, a Dolphin; the nectary is supposed to resemble that fish.

3. *EPIDENDRUM CRASSIFOLIUM*, Thick-leaved. (Bot. Mag., 3543.) Orchidaceæ; Gynandria; Monandria; Synonym; *E. ellipticum*. A native of Rio Janeiro, producing erect spikes of rose coloured blossoms, making a showy appearance. Each blossom is near an inch across. This species has been figured in Loddiges' *Botanical Cabinet*, under the name of *E. ellipticum*, and which Dr. Lindley refers to his *E. crassifolium*; Sir W. Hooker is of opinion that they are not the same species, the former being a native of Brazil, and the latter of St. Vincents. *Epidendrum* from *epi*, upon; and *dendron*, a tree; the native habitation.

4. *HEUCHERA CYLINDRACEA*, Cylindrical. (Bot. Reg., 1924.) Saxifragaceæ; Pentandria, Digynia. A hardy herbaceous perennial plant, a native of North America, where it grows in dry mountain woods. The flowers are apetalous, produced upon a small panicle. The species was discovered by Mr. Douglas. *Heuchera*, in compliment to J. H. Heucher, professor of Medicine, Wurtemburgh.

5. *HIPPEASTRUM AMBIGUUM*, var. *longiflora*; Knight's Star-lily. (Bot. Mag., 3542.) Amaryllidæ; Hexandria; Monogynia. This very splendid flowering species has bloomed in the Glasgow Botanic Garden. It was sent there from Lima, by J. Maclean, Esq. The scape contains several blossoms, each being as large as the common white lily of the gardens. They are white, veined, streaked with red, and greenish towards the bottom of the tubular part of the flower.

ISMENE AMANCAES, *Narcissus* flowered. (Pax. Mag. Bot.) Synonym, *Pancratium*; *Amancaes*; *Amaryllideæ*; *Hexandria*; *Monogynia*. A native of the hills of Amancaes, near Lima, in Peru, where it grows in vast abundance, producing a profusion of its fine yellow flowers. It was introduced into this country in 1804. It merits a place in every stove collection of *Liliaceæ* plants. The plant grows about two feet high, sending forth a scape near a yard high, containing several flowers, each about six inches long, delightfully fragrant. The limb portion of the blossom is about four inches across. It is cultivated by Messrs. Rollinsons, Tooting Nursery. *Ismene*, after *Ismene*, daughter of *Œdipus*.

7. **LILIUM PEREGRINUM**, Narrow sepalled white Lily. (Brit. Flow. Gard., 367.) *Liliacæ*; *Hexandria*; *Monogynia*. An old inhabitant of the gardens in this country, but which has nearly disappeared. It is, however, cultivated in the very select collection of R. H. Jenkinson, Esq., Norbiton Hall, Kingston, Surry. The flower stem rises about a yard high, terminating in a spike of ten or twelve flowers. They are campanulate, drooping, of a pure white. Each flower is about three inches long.

8. **GENOTHERA FRUTICOSA**, VAR. **AMBIGUA**. Shrubby Evening Primrose. (Bot. Mag., 3545.) *Onagrarica*; *Octandria*; *Monogynia*. Dr. Hooker describes the following varieties, viz.:—*O. fruticosa vera*, *O. f. ambigua*, *O. f. phyllopus*, *O. f. incana*, *O. f. Frazerii*, *O. f. linearifolia*. *Genothera fruticosa*, is a species, widely extended throughout North America, from Canada to Carolina; but so variable in its foliage and hairyness, as to have suggested the idea of their being the several species above enumerated. All of them are handsome border flowers, producing yellow blossoms, which continue for a long time. Any of them would be ornamental to the flower garden.

9. **ONCIDIUM CRISPUM**, Curled flowered. (Bot. Reg., 1920.) *Orchidacæ*; *Gynandria*; *Monandria*. This very singular and noble-looking species is a native of Brazil, and has bloomed in the fine collection of Richard Harrison, Esq., Liverpool, Messrs. Loddiges's, and others in this country. In its native habitation, on the Orgean mountains, in Brazil, it has been found that a single stalk produced from fifty to sixty flowers. Each blossom is two inches, or upwards, across, of a dark chesnut-brown colour, most singularly handsome, being unrivalled in its tribe. This very interesting genus abounds in the tropical parts of America, and are found growing profusely in the highest mountains. One species, *O. nubigenum*, has been discovered, where the air is nearly freezing, on the mountains of Peru, at the elevation of fourteen thousand feet above the sea. There are many handsome flowering kinds already introduced into this country, some of which are but of recent importation. One species, *O. ornithorhynchum*, a native of Mexico, produces flowers of a beautiful rose colour. *O. lunatum*, a beautiful little species from Demerara. There have been many other fine species discovered which have not yet been sent to this country, viz.:—*O. macranthum*, from Guayaquil; *O. pictum*, from Peru; *O. tigrinum*, from Mexico; *O. deltoideum*, from Peru; *O. gracile* from Brazil; *O. isopterum*, from Brazil; *O. leucochilum*, from Mexico; *O. lunatum*, from Demerara; *O. maculosum*, from Brazil; *O. Martianum*, from Brazil; *O. ramsum*, from Brazil; *O. reflexum*, from Mexico; *O. ramiferum*, from Brazil; *O. retusum*, from Peru.

10. **POTENTILLA THOMASII**, Thomas's Cinquefoil *Roseacæ*. (Brit. Flow. Gard.) *Icosandria*; *Polygynia*. This is far the handsomest of the yellow flowered kinds. It was discovered by M. Thomas, a botanical collector, on Mount Pollinæ, in Italy. It is cultivated in the very superb collection of Mrs. Marryat, Wimbledon, where it bloomed the last season. It is quite hardy, and certainly merits a place in every flower garden. The plant grows about one foot high, and crowned by large corymbose heads of fine lemon coloured flowers. Each blossom is more than an inch cross.

11. **ROSA SINICA**, Three-leaved China Rose. (Bot. Reg., 1922.) The plant is well deserving a place against a good aspected wall, or similar situation. It grows rapidly, and is well suited as a climber for covering a wall or trellis. The foliage is of a shining green. The flowers are produced in profusion of a pure snow-white. They are single, but being so beautifully white, and each more than three inches across, renders it highly ornamental. The rose is

much esteemed in the south of France and Italy, where it is very generally grown in the gardens. The plant may be obtained of Mr. Wood, of Maresfield, Sussex.

12. *SISYRINCHIUM SPECIOSUM*, Showy flowered. (Bot. Mag., 3544.) Iridææ; Triandria; Monogynia. A very pretty, flowering, greenhouse species, a native of Chili, from whence it has recently been imported into this country, by Mr. Towart, gardener to Her Royal Highness the Duchess of Gloucester, Bagshot Park. In its native country it is found on sandy hills, where it blooms profusely. Each flower is about two inches across, of a splendid purplish-blue, with a yellow eye at the centre. The stems rise about eight inches high. It deserves a place in every greenhouse. The plant has bloomed in the Glasgow Botanic Garden.

13. *TRADESCANTIA CARICIFOLIA*, Sedge-leaved Spider-Wort. (Bot. Mag., 3546.) Commellinæ; Hexandria; Monogynia. The species is a native of Texas, from whence it was sent to this country, by the late Mr. Drummond. It has bloomed in the Glasgow Botanic Garden, in a cool frame. The flower stems rise about a foot high, producing an umbel of many flowers, of a purplish blue colour, each flower being near an inch and a-half across. This, like all the spider-worts, is a very neat and pretty flowering plant. *Tradescantia*, in compliment to Mr. John Tradescant, gardener to King Charles the First.

14. *TRIGONIDIUM OBTUSUM*, Blunt-petalled. (Bot. Reg., 1923.) Orchidaceæ; Gynandria; Monandria. This singular species of the orchideous tribe of plants has been sent, by Mr. Colley, from Demerara, to R. Bateman, Esq., of Knypersley Hall, Congleton, Cheshire. The genus belongs to the sort of Maxillarie like plants, but the curious flowers sufficiently distinguish it as a genus. It is of a free flowering habit. The flowers are near two inches across, white, and orange-brown, with purple veins. *Trigonidium*, in allusion to the triangular form of several parts of the flower.

15. *TRITELEIA UNIFLORA*, One-flowered. (Bot. Reg., 1921.) Liliacæ; Hexandria; Monogynia. An half hardy, bulbous, plant, a native of Mendoza, where it was discovered by Dr. Gillies. Each flower is about an inch and a-quarter across, white, with a delicate sky-blue tinge. It is cultivated by Mr. Lowe, of Clapton Nursery.

16. *TULBAGHIA LUDWIGIANA*, Ludwig's. (Bot. Mag., 3547.) Liliacæ; Hexandria; Monogynia. This plant was introduced into this country in 1834. It is a native of Cafferland, South Africa. Scape grows about two feet high. The flowers are produced, in a umbel, about eight in each. The perianth is of a greenish purple, with purple streaks, the limb six parted. The inner part forms a crown to the mouth of the tube, of a fine yellow colour.

17. *WITSENIA CORYMBOSA*, Corymbose, flowered. (Pax. Mag. Bot.) Iridææ; Triandria; Monogynia. A native of the Cape of Good Hope, well deserving a place in every greenhouse. The plant produces a profusion of flowers, in dense corymbs, of a lively bright blue colour. It blooms from August to the end of the year. *Witsenia*, from Mr. Witsen, a Dutch Consul in India.

18. *VERBENA AUBLETIA*, VAR. *DRUMMONDI*, Sweet Lilac Vervain. (Bot. Reg. 1925.) Verbenaceæ; Didynamia; Angiospermia. This very pretty variety has been recently introduced into this country from Louisiana, from whence it was sent by Mr. Thomas Drummond. This variety is very different from the variety which has been in our collections in the country for the last two years, the flowers of that variety being of deep rose colour, whilst the present variety has flowers of a beautiful pale lilac. They have a peculiar fragrance. The plant is a half-hardy perennial plant, deserving a place in every flower garden. Messrs. Rollissons have plants of this pretty variety, where we saw it in bloom the last summer..

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE MANAGEMENT OF ERICAS.—I shall esteem it a great kindness if some Correspondent of the *Cabinet* would give me the particulars of a mode of treatment with Ericas, so as to keep the plants bushy and healthy. I have had frequent renewals of plants, purchasing bushy ones, but though I have kept them in an airy part of the greenhouse, and to the best of my knowledge have treated them with a regular supply of water, &c., yet they soon become naked, and in two or three years died. I have invariably found too, that a great quantity of my large plants, bought at a distance from my own residence, have soon died after removal. How is this to be accounted for? Would small plants be likely to succeed better? I beg in this place to thank the Correspondent, "A Practical Heath Grower," for his very excellent remarks on Ericas in the January number. If the same person, or others, practically acquainted with the subject, will favour me with a reply, I shall be greatly indebted for such kindness.

North Wales, January, 1837.

W. P. HAMILTON.

ON IPOMOPSIS ELEGANS.—I have had seeds sown of this handsome flowering plant for the last four years, I have succeeded to get the plants near flowering, when, on a sudden, without any reason I could discover, they withered, drooped, and died. This has invariably been the case with plants grown in pots, as well as in the open border. I shall be very much obliged if some Reader of the *Cabinet* would give me the particulars of a successful mode of treatment. An early attention to my request will be an additional kindness, so that I may be successful the coming season. This plant did go by the name of *Gilia aggregata*, two or three years since. I name this lest any of the Readers should not know it by the more recent name.

Nottingham.

MEDICUS.

ON A LIST OF ROCK PLANTS.—Will you, or any of your Correspondents, be kind enough to give a list of some of the best plants for rock work? A variety of colours, and flowering at different seasons is desirable. The rock has a western aspect.

J. G.

To "J. K." I would be obliged to your Wilts Correspondent, whose initials are the same as my own, J. K., (and who I humbly thank for his honourable mention of my name in last month's *Cabinet*.) if he would favour me, at his convenience, with any list or hint he may deem it prudent to let me know of; and he in return may, with every liberty, put any question to me on any subject on gardening, &c., he may consider me likely to know; my knowledge is not much, but what I know I will freely communicate.

J. KERNAN.

4, Great Russell-street, Covent Garden, London.

REMARKS.

ON TREE MIGNONETTE.—Sow seed of the common Mignonette, towards the end of February, in pots of the size thirty-twos, such being near six inches deep, and four and a-half diameter, inside measure. Use a good rich loamy soil. After the seed is sown, place the pots in a cucumber or melon frame. When the plants are up, they must be placed where they can get air, to prevent them being drawn up weakly as well as to preserve them from damping off. When the plants have made a few leaves, pull up all the plants but two, which must be allowed to remain till they get over danger from damping off, when the best may be retained and be secured to a support. As the plants grow, side shoots will push, they must be pinched off, always leaving the leaf at the

base of each shoot which contributes to its growth. If the leading shoot should shew flower it must also be pinched off. When the plants have grown ten or twelve inches high they may be removed to a warm part of a greenhouse. Water must be given when the plants are dry. As the season advances the plants must be placed in more airy situations, which will gradually harden them. When the plants have reached a desirable height, from half a yard to two feet is very desirable; pinch out the leads. This will induce a number of lateral shoots to push and form a bushy head. Plants thus treated will bloom early the following spring; after they have shewed flowers, the plants, if vigorous, may be removed, with balls entire, into pots a size larger, they will then bloom all the season.

T. T. B.

Chelsea, Jan. 12th, 1837.

ON BLOOMING HYACINTHS IN GLASSES.—The bulb should be allowed to touch the water, then be placed in a dark room or cellar for two or three weeks. The water will by that time become offensive and require to be replaced. With the fresh water given add a small portion of salt, about the size of a hazle nut. The water must be changed, and salt added twice a week in future. When the glasses are brought out of the dark room or cellar into a sitting-room, the plants push more rapidly and flower sooner by being kept in the darkest part of the room, and if in a high situation, as a shelf or chimney-piece, all the better. When the flower stem has pushed several inches high, the glasses may be placed near the window to give colour to the petals; without which the darker the situation the lighter coloured the flowers. In order to have the fine stems of flowers erect, I have had a wire frame made which fastens round the glass near its bottom, again nearer to its widened part at the top, the wire is then bent to the middle of the opening and then carried upright to the height desired, to this the flower stem is secured, it prevents the flowers from overwhelming the glass as well as keeping the stem neat.

JOHN CHARLES.

Monmouth, Jan. 12th 1837.

JONES'S SULPHUREA ELEGANS DAHLIA.—We have been informed that an old and very inferior flower called Sulphurea Elegans, has been sent out last season as a substitute for the former splendid sort. The old sort is not worth growing in any collection, whilst the latter deserves to be grown in every one. The flower is of a very large size, of an unique handsome colour, a very perfect shape, and far superior to any other of the yellows I saw at the exhibitions in the metropolis, or the country during the last season. Persons who order this kind during the present year, should obtain the warrantry of the correctness of the kind from the person offering for sale.

W. C.

Wallingford, December 16th, 1836.

TO OBTAIN FLOWERS FROM BULBOUS ROOTS IN THREE WEEKS.—Put quick lime into a flower-pot till it is rather more than half full; fill up with good earth; plant the bulbs in the usual manner; keep the earth slightly damp. The heat given out by the lime will rise through the earth, which will temper its fierceness: in this manner flowers may be obtained in three weeks.—*Magazine of Domestic Economy.*

HEATING BY MEANS OF HOT WATER.—I have recently seen an experiment tried in using glass pipes instead of iron, and which answered most completely, giving out heat much quicker, affording a greater degree of heat, and retaining it longer.

ON DRYING PLANTS.—I observe that the weights I use in drying plants have been misprinted in the December number. They should be, one weight of 20lbs, and two of 10lbs, each.

PRIMULA SCOTICA.

ON THE AGE OF TREES.—Adamson and De Candolle have ascertained and published accounts of the probable longevity of numerous celebrated trees. Some of the Cedars of Mount Lebanon, measured in 1660, by Maundrell, and Pocock, were found to have been nearly 800 years old. The Oak of Welbeck Lane, described by Evelyn, must have been 1400. The Olive trees in the garden of Jerusalem certainly existed at the time of the Turkish conquest of that city. The English Yew trees of Fountain's Abbey, Yorkshire, have survived

1200. Those in the church-yard of Crowhurst, in Surrey, 1400. That of Fotheringall, in Scotland, from 2500 to 2600. That of Braburn, in Kent, 3000. But they describe two other trees of a most remarkable character, viz., the Boaback,* estimated at 5150; and the Cypress of Taxodium, in Mexico, which is 117 feet 10 inches in circumference, is still more aged. The ages of the following trees have been ascertained, with as much exactness as historical data, or the principles which have been derived from admeasurement and counting the circles of trees of like kind afford:—A Date tree in Egypt, 300. Apricot tree in Damascus, 324. Red Oak of Mount Etna, 400. Walnut tree of Balbec, 406. Almond tree in Damascus, 640. Fig tree in Damascus, 648. Olive tree of Palestine, 719. Fig tree of Palestine, 780. Olive tree of Asia Minor, 850. Oak in Louisiana, 1000. Sycamore of Heliopolis, 1805. One of Cedars of Mount Lebanon, 1824; another, 2112. A Peletin (terebinthus) of Asia Minor, 1890. The celebrated Chesnut of Mount Etna, 2660. The Sycamore of Bosphorus, 4020.—*Youth's Instructor*.

ON THE CONTRASTING COLOURS OF FLOWERS TO PRODUCE THE BEST EFFECT.—To demonstrate the theory of colours, then, a circular card may be divided into seven compartments, by lines drawn from the centre to the circumference, one compartment being painted red, the next orange, the third yellow, the fourth green, the fifth blue, the sixth purple, the seventh violet. Let water-colours or patterns of ribband, of each of these respective colours, be procured, and arranged in the enumerated order. It will be found, that any one of these colours is producible, by due admixture of the two adjacent colours. The first and third, red paint mixed with yellow, produce the second colour, orange. The second and fourth, orange mixed with green, produce the third, yellow; the third and fifth, yellow and blue, generate green, the fourth colour; that and the sixth form the fifth, blue; the fifth and seventh violet create the sixth, purple; the sixth and the first, red, constitute the seventh, violet; the seventh and second, orange, terminate in the first, red. What then is the necessary conclusion, but that in the order of prismatic colours, adjacent colours are inharmonious; and that harmony results only from union of two colours, distant in order by one intermediate tint. The principle productive of harmony being thus discovered, may receive confirmation, by experiment with ribbands of different colours, blended, or with sewing silks twisted, in the preceding order of arrangement. Yet, beauty resulting not only from harmony, but also from contrast, the next inquiry is, from what principle to produce the latter effect. It is discoverable from the following experiment. To patterns of ribbands or silk, of the seven preceding colours, let white and black be added; and all be placed in a perpendicular line, the white above the red, the black beneath the violet, adapting the numbers to the altered arrangement, the white being denominated one, the red two, and so on, the violet being marked eight, and the black nine. By advancing black to the side of white, or as it is accounted the absorption or absence of all colours to the accumulation or presence of all, the strongest possible contrast is produced. Violet and purple will also contrast with white, in decreasing ratio; while the remaining colours produce a very inferior degree of contrast, by no means eligible from their approximation to white, in graduated reflection of light. On a similar principle, the best contrast to black next to white, is red, as the colours ranking first of the seven in order of refraction, therefore first in power of reflection; orange is an inferior contrast, but yellow, blue, purple, or violet, from graduated absorption of light, present no contrast to its entire absorption, black. In the same manner red receives no contrast from the two nearest colours in the prismatic gradation, orange or yellow, but from the semi-colour green; it admits the lowest contrast in blue, higher in purple, or violet, and the highest, as already remarked, in black. The decisive inference then is, that contrast is not producible without passing over two prismatic colours at least. Such being fixed laws, constituting the primary principles of the theory of colours, and demonstrable by experiment multifarious and conclusive, their application to landscape gardening and the disposing of flowers in the flower-garden, &c., involves not the slightest difficulty, and solves numerous phenomena. Why, for instance, does verdure, or why do shrubs, supply the best relief to gaudy flowers? On account of excellent contrast, green being a sober colour inter-

mediate between the deeper and brighter tints, consequently affording a foil to all. Why is snow injurious to the effect of foliage, or flowers, of every graduated tint? On account of its glaring whiteness, supplying neither contrast nor harmony, white entering into the composition of every shade of tint, and particularly being productive of semi-colours; consequently, being a component principle, when uncombined it can neither harmonise, nor contrast with itself. Why does the olive tint of the expanding oak-leaf offend the eye of taste? Because, its being composed of green in combination with yellow, the component principle can neither harmonise nor contrast with itself, in a simple uncompounded tint, in the surrounding grass, or foliage of more forward trees. Why does the verdant herbage of spring produce inferior picturesque effect, in grounds ornamented with trees, than the sterile grass of early autumn, consequent on mowing? Because, spring grass and foliage are gradations of one and the same colours; consequently, in whatever variety of gradation, the diversified tints of any colour, neither harmonising nor contrasting, cannot possibly be productive of picturesque effects. Contrarian is the effect of sterile grass, on account of its russet tint, like ripened corn, presenting advantageous contrast; russet being a semi-colour, uncompounded of green. Countless natural phenomena, with their solutions, might be multiplied, illustrative of the preceding theory of colours being of practical utility in gardening.—*Dennis's Landscape Gardening.*

AURICULA.—Nature has given such a finish to the finer specimens of this plant, that art may well be required to furnish them with the shelter of a roof. Some of the family are hardy and beautiful as spring flowers on the open borders; but the more delicate cannot endure the pelting of the rain which falls in April, the season of their beauty; a glass frame is therefore essential to the saving of the fine meal with which the flowers and sometimes the leaves are covered, and which seems designed to moderate the heat of the sun, but which has in itself no defence against the washing of the rain; and hence those plants which are brought to great fineness by cultivation, soon perish or grow poor when neglected. The best specimens at first raised from seed are quickly propagated by off-sets from the roots; and as cultivators have great tenderness for their young brood, you have only to open an asylum and it will soon be filled. It were vain to attempt particular descriptions of five hundred varieties. As to the general properties of a good plant, the stem should be of such length as to carry its head of flowers erect, and raised above the foliage. About seven or eight-pips, or single blossoms, make a rich and close umbel of flowers. The circumference of the border of each blossom should be round, the anthers large, the eye smooth, white, and circular; the ground colour should be equal on all sides, defined next the eye, and only broken where it blends with the edging. The favourite ground colours are—black, purple, dark brown, rich blue, bright pink, crimson, or glowing scarlet. A green edging is fine, but that combined with a crimson ground colour, being very rare, is, probably on that account, prized the most. Florists have given receipts for compost with trifling exactness of invalids who pore upon dietetics and weigh their food. Sound earth, vegetable earth, peat earth, decayed willow-wood, and wood ashes, are recommended in proportions, from half, down to twelfth and twenty-fourth parts. No doubt such a commixture may be very good, but some other will do just as well. Let the compost be rich and light; consisting of one half of old rotted cow's dung, either from a spent hot-bed or gathered from the fields, and the other half black mould from the garden, adding more or less of peat moss and sand according as the soil is light or heavy; the whole mass to be so blended as to assume a uniform consistence. With this, fill the flower-pots within an inch of the top, taking care to cover the hole in the bottom with a piece of slate to prevent the intrusion of worms. The pots should be six or seven inches wide and about the same measure in depth. Smaller ones may be used for bringing forward young plants, whether seedlings or off-sets. The proper time for planting or re-potting, is in August. Strip every plant of its decayed leaves and of all stumps of roots beneath the young fibres, and having firmed the earth with the hand give a plentiful watering. The pots may then be closely set together in the frame, which should be half filled with saw dust, in which the pots are to be immersed to the lip. The glass cover may be put on at the first to encourage striking, and then kept on or off according to the weather,

using the help of a bass matting in every hard frost. Before winter, fill up the vacant inch left on the surface of the pots with old dung gathered from the fields, which replace with fine mould about the time of flowering. To destroy green fly, with which the plants are apt to be infested, a slight cloud of tobacco fumes closed for a few minutes under the glass cover is all that is necessary. Other flowers in congregated array may be more dazzling, but the auricula so exhibited has no rival in soft, rich, and diversified beauty. It has more of dignity than gayety; it has not the tinsel of a theatre, but the jewellery and grandeur of an assembly of nobles and high dames, in broad ruff, powder, crimson, purple, and ermine. The sight justifies the art: art cannot make the purple of the auricula, but without art the auricula has not the purple; and the finest forms left to the common fare of earth and skies, soon become the spectres of what they were—the gorgeous velvet dwindling to the meanness of hawksweed, and the crown-broad disk to the dimensions of a daisy.—*Manse Garden.*

THE LILY.—Of which there are many varieties, but a few of the best are the large common white, growing four or five feet high; (the small white flower, not unfrequently called lily, is a *Narcissus*;) the orange lily, which takes its name from its colour; the fiery lily, which may be known by the bulbs it bears on the stalks; the martagon, or Turk's-cap lily, of which there are many sorts, and which are named from the turning in of the petals presenting the figure of a turban; the tiger, and the crown imperial. The bulbs are scaly and do not agree with the treatment of hard bulbs. If kept long out of the ground they must be placed in sand to prevent drying. The proper season for planting is September; planted in spring they are apt not to flower that year. But the best rule with all the tribe, is to observe when the leaves begin to decay after the season of flowering, and then to take them up, whether to give more room or fresh soil. They are too monstrous for beds and do best either in single plants or in patches at intervals. The crown-imperial, though not the most showy of lilies, is a grand and elegant flower, and remarkable for its rapid growth at an early period of the spring. At that season of all food it is the most enticing to snails. Being horribly olefiant and juicy, it is probably to their palate what garlic is to a Spaniard. But unfortunately for the plant, being fisular, the snail perforations, resembling those of a flute, admit the air direct to the heart, and death is the consequence. Early in spring scoop out the earth around the stems, and with it the slimy people sleeping beside their banquet. Put a roll of stiff paper round each stem, not tight, and fasten it with a pin; then draw in the earth, leaving the paper two inches higher. The snails do not find their way over.—*Ibid.*

REFERENCE TO PLATE.

The superior kinds of Pinks and Picotee given this month are seedlings in the possession of the persons who raised them, and who offer them for sale. They have been advertized in the *Cabinet* for October and November, last year. We have been informed, by persons who have seen the flowers, that they are of first-rate excellence, and ought to be in every collection of this class of flowers.



THE FLORICULTURAL CABINET,

MARCH 1st, 1837.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.—ON TENDER AQUATICS.

BY C. B. B.

THE enquiry of your Liverpool correspondent under the signature of *Escholtzia*, respecting plants which would grow in a tank of tepid water, (such as is frequently attached to steam engines,) induces me to trouble you with the following observations; which I hope may meet the eye of some lover of flowers at Birmingham, Sheffield, Leeds, Liverpool, or Manchester, and induce him to make an experiment, which I think can hardly fail of success. Every one at all acquainted with stove plants, is aware of the exceeding beauty and magnificence, of the tropical water plants, even when confined to the narrow pots and pans, and cisterns, to which the limits of our hothouses generally restrict them. Now it is most probable that these plants would flourish with even more than native luxuriance, in the warm water tanks attached to steam engines. They delight in extreme heat, and will bear any temperature short of 100 degrees; about 85° to 95° during summer suits them best, and in winter from 60° to 65°; and some species will not flourish, without a continual change of water, which it is almost impossible to provide in a common hothouse or pit; but, which, might always be ensured by constructing a large tank, and allowing the hot waste water from a steam engine to flow into it. In case any of your readers should be willing to try the experiment, and it is indeed one well worth trying, (for the magnificent plants in question are rarely seen in any tolerable beauty in this country,) I add the following suggestions:—

The tank should be in a situation to receive plenty of sun, and should be covered with cucumber lights, to prevent the blacks from the engine, and the inclemency of weather, from injuring the buds and leaves, as the flowers of several species arise above the water, and would never endure the air of our climate even in summer. The plants should be planted in very large pans, 1 foot deep and 18 inches across

at least. These pans should have a layer of broken brick and some clay about 4 inches thick at the bottom, and be filled with stiff pond mud, or strong yellow loam, fit for growing melons, and the surface of the mud should be covered with stone and broken brick. The pans should be sunk, not less than one foot nor more than three, below the surface. Some species must not be more than six inches under, but most of the strong growing ones, from two to three feet. I should leave them always under water unless experience shewed, that any species perished in winter, which I do not think probable, unless it were *Nelumbium speciosum*, but I suspect this, which is difficult to keep elsewhere, would survive in such a situation.

The waste water should run off by a siphon from the bottom of the tank, so as always to draw off the coldest water, and if the heat was found too great for the plants in winter, when they die down, the waste might then be allowed to flow off at the top, so that the bottom water in which the plants were sunk might be coldest.

The species I should recommend for the experiment are *Nymphaea Lotus*, *N. rubra*, *N. cerulea*, *Nelumbium speciosum*, *Euryale ferox*, *Pontederia crassipes*, and *Limncharis Humboldtii*, but particularly the five first, which are strong growing plants. *Nymphaea Lotus* grew almost like a weed with me last year. The best season to put them in would be March, as the offsets abound most at that time, and some would flower in May. Some gold and silver fish, in the same place would be highly ornamental, and consume the filth of the engine.

Of course the plants will not succeed if the boiler of the steam engine is of copper, or if the temperature of the tank ever much exceeds 90°, but by proportioning its surface to the supply, this might easily be managed. If the glass case be high enough probably many *Orchidea* would succeed suspended over the water in the same place. One might be constructed to cover a small reservoir. I hope the above will meet the eye of some one able to make the experiment, and who will communicate his success.

ARTICLE II.—REMARKS ON THEORY AND PRACTISE,

With some Observations on the Food of Plants, &c.

BY JOSEPH HAYWARD, ESQ., LIME REGIS, DORSETSHIRE.

YOUR *Floricultural Cabinet* I think well calculated to make a valuable work if you adhere to the proper principle, and it appears to me you have it in view, which is, to diffuse a knowledge of the cultivation of Plants deduced from practice. The object of every cultivator is to produce certain effects; and when people undertake to produce any effect, who do not know the cause, they generally form some supposition of what the cause is; such supposition forms Theory, which may be true or false, and as the latter is too often the case, the students of every art, are apt to treat Theory with contempt, and to depend upon the

knowledge to be required, by imitating a practitioner ; but the knowledge to be obtained from mere practise, however successful, is little to be relied upon ; for although the cause of success may assist, the practitioner may be ignorant of it, and therefore, although the same practice may be followed in another situation, it may fall altogether, because the cause is not there established. If it be an axiom, that every production of nature and of art, is the effect of some cause—it must follow, that before any effect can be produced, the cause must be established ; and before any effect can be effectually prevented, the cause must be removed ; and consequently, before any person can establish or remove a cause, they must know what it is. Then how is a knowledge of the causes of effects to be obtained ? Certainly by no other means than by first forming a Theory, and then putting it to the test of practical demonstration, to ascertain its truth or falsehood. If a theory be thus proved to be true, the knowledge of it is science. I consider the causes of all effects to be certain elementary principles established in nature, and which are brought into action or rest, and made to exist in a separate or combined state, and to undergo certain changes in form and duration of their existence, by certain immutable laws of nature. My efforts have long been directed to the ascertaining the true causes of the different effects it is desirable to produce by the cultivation of plants ; as well as the true causes of those effects, it is desired to prevent ; and for this purpose, I have not only put my own Theories to the test of repeated practical experiment, but also most of the Theories of the celebrated Physiologists and Chemists, and practical Professors of Horticulture. And in this, all who have done me the honour to visit my garden, admit, that I have established many important principles of practice : my practical elucidations are more particularly exhibited in the training and feeding of fruit-trees ; I say *feeding*, because it is an obvious fact, not only that plants require food, to sustain them, as much as animals do, but that their growth and productions are determined by the quality and the quantity of the food they are supplied with. As to give such an explanation of the nature and properties of different soils, and of different manures, or the elements of the food of plants, would occupy more of your pages than you can afford, you will probably allow me to refer such as wish to make a minute enquiry into those subjects, to a little work I have lately published, “On the Causes of the Barrenness and Fruitfulness of Plants and Trees.” I will, however, beg leave now to offer the 9th law of nature, in my arrangement, for the immediate consideration of your readers, and shall be ready to give any further information in my power : the 9th law “The leaves form the excretory Organs of a Plant or Tree ; and whether the supply of food be great or small, a plant or tree cannot attain, nor sustain itself in, a perfect state of fructification, until it is furnished with a surface of leaves duly proportioned to the sap supplied by the roots. To enable them to perform their functions, it is

also necessary that the leaves should be duly exposed to the action of light, and to the influence of the sun and the air." Now according to this law, it must be obvious that the cutting back and shortening the branches and lessening the quantity of leaves, must obstruct and retard, rather than forward the production of flowers, seeds, and fruit; and yet this is a general practice. It generally happens, that when a plant grows luxuriantly to leaves, branches, and stalk, it is but little inclined to produce blossoms; we may therefore justly conclude, that in such cases there is a greater supply of food than the leaves are equal to; and that although we cannot enlarge their powers, we can relieve them in their duties, by lessening the supply of food, and thus promote fructification.

Lime Regis, Dorset, January 10th, 1837.

(We feel assured our readers, will with us, be much obliged by any further remarks of Mr. Hayward's.)—CONDUCTOR.

ARTICLE III.—ON A LIST AND TEMPLE OF ROSES.

BY S. W. E. SMITH, LEAMINGTON, HANTS.

A Correspondent, Pedro, requested a list of Climbing Roses, a very superior list is given in this month's *Cabinet*. I have in my own garden a Temple of Roses, it consists of eight posts, ten feet high, connected at the top by iron rods. To each post are two climbers, most of which have grown to the top within six months. They are the White Banksia, Yellow ditto, Rosa Ruga, Rosa Russelliana, White Boursault, Purple ditto, Grevillii or seven sisters, Rubra, sweet scented Red Multiflora and White ditto, Rosa Clair, White Noisette, Pink ditto, Purple Grevillii, Dark double China, Pale ditto.

The centre of the bed is a rich mould, and manure is now laid plentifully on it, which will be forked in next spring, and then I shall cover the bed again with moss; all sorts of dwarf Roses are planted in the centre, a border of wild camomile I have been recommended to keep round the edge, to prevent the aphids, but my children carry all the lady birds they can find to the temple, and I have no doubt I shall keep the trees clean and healthy.

ARTICLE IV.—ON THE CULTURE OF THE PANSY.

BY PENSEE.

By following the method recommended in your December *Cabinet* by Mr. Todd, for propagating the Heartsease, I think it would be found that by taking off the young suckers as they appear breaking through the ground, you would rob yourself of your finest blooms, to say nothing of the trouble of making each cutting as taken off, and the chance of an unsuccessful strike.

I therefore offer to your readers the plan I have adopted, and with much success. When the plant begins to spread, which is about June, I throw into the centre of each a double handful of rich and finely

sifted mould, thus inducing the plant to form roots near the surface. Early in September I take up the plant, *wash* the root from the dirt, and divide it, seldom obtaining less than two dozen plants from each, and often many more. These I plant about three inches apart, where they remain until wanted for the late Autumn or Spring planting, having found it necessary to plant at both these seasons, to procure fine blooms for exhibition both in April, May, and June. I should also recommend a much richer compost than Mr. Todd thinks necessary, and not to attempt to bloom plants a second year.

I must also join issue with Mr. Todd in his recommendation of removing as much earth as will adhere to the roots, when transplanting from his nursery into the blooming bed, as possible; because I have found the very reverse to succeed best. I have given each way a fair trial, and I now always wash and shorten the roots before planting.

(Continued from page 10.)

ARTICLE V.—CULTURE OF PELARGONIUMS.

BY MR. APPLEBY.

THIRD Section.—Species that have been hybridized.—This section of Pelargoniums is the most numerous, not so much in plants that have specific botanical distinctions, as in varieties raised from seed obtained from plants, the pollen of which has been mixed with others; these varieties are almost endless, and are produced annually, chiefly by nurserymen near London.

On account of their easy culture, they are in great request for the greenhouse, flower garden, and windows, both of the cottager and his more opulent neighbour, and as this class of flowers affords a cheap, lasting, and innocent pleasure to so many individuals, I hope I shall be pardoned by my intelligent brethren, whom, of course, I do not presume to instruct, if I am rather particular in directions in the culture of these charming flowers.

As this section is cultivated both for the greenhouse, and flower garden to plant out in beds, I shall divide the culture into

1. Propagation.
2. Greenhouse management.
3. Flower Garden management.

1. *Propagation by Cuttings.*—The best cuttings are the young tops, taken off at the third or fourth joint, and the two lowest leaves pared clean off with a sharp knife, if the kind to be increased is scarce, cuttings of any one year old wood may be struck, provided they have two joints, one to be put in the soil, and the other to grow, but such cuttings do not make such neat bushy plants. Cuttings of the roots also will grow, if taken off in pretty large pieces, with some small fibres attached to them. The soil for cuttings I have found to do the best, is pure loam mixed with fine sand, which insure closeness round the cuttings without any fermenting substance to rot the young and

tender wood. For choice kinds I use the smaller 60 pots, and put one cutting in each pot, by which plan I run no risk in potting. For commoner kinds, when a cutting or two is no object, I use 36 pots, putting five or six cuttings in each, round the edge of the pot; and when fairly struck I pot them off into small pots, and put them into a frame and shade until fresh rooted.

The best season to put in cuttings, undoubtedly, is the month of March; cuttings made at that season and plunged out rather deep in their small pots in the open ground in June, and taken up and repotted before the frost sets in in Autumn, makes the best plants; they are stiff, bushy, dwarfish, healthy plants, and flower admirably the following spring. The month of July, however, is the season when cuttings are most plentiful, on account of the flowering season in the greenhouse being over, and many of the plants requiring cutting down. Cuttings made in July I pot off when struck, in pure loam in small pots, and plunge them up to the rims of the pots in coal ashes at the back of some low hedge or paling, shading them from the sun.

The best situation in which to strike the cuttings, is a small frame set upon a moderate hotbed, the dung to be covered with some sand or coal ashes three or four inches thick, and the cutting pots set upon them, shading with a thick mat during sunshine, and kept close for ten days or a fortnight, unless steam arises when the lights are propped up an inch or two in a morning. As soon as I judge they have formed their callosities, (a swelling at the bottom of the cuttings,) I gradually inure them to the full sun. I water very moderately until they are struck, when those that are in single pot I place in a shady part of the greenhouse, to harden a little previous to plunging out of doors.

When a large supply is wanted for the flower garden and I am short of room or convenience, I take of as many cuttings as I judge needful in the month of September, and keep them in the cutting pots until March, when I pot them single, and grow them in a pit or frame until the planting season.

Propagation by Seed.—When the seed is ripe I gather it and keep it dry until February or March, when I take 36 pots filled with a compost of rotten leaves, peat earth, and loam, in equal parts, well drained, the compost I press down pretty firm, and sow the seed rather thin, covering it with the same soil very lightly, placing them in the frame with the cuttings. When they have come up and have made their second leaves, I pot them off into 60 pots, and replace them in the frame until they are well established, when I take them into the greenhouse near the glass, gradually inuring them to the open air, and then I plunge them out, as I manage the cuttings in single pots above mentioned.

Both cuttings and seedlings when about four inches high should have the top buds nipped off, which makes them branch out three or

four shoots, and of course so many more heads of flowers the following season.

2. *Greenhouse Management.*—The season to take Geraniums into the greenhouse depends upon the weather, and as all Cape plants are much healthier, and flower more freely the more they are exposed to the full air, so long as frost keeps off I delay the taking them in, in fact this last season, I did not house them generally until the middle of October. Choice kinds I had covered up with mats or large sheets of canvass elevated on stakes, on such nights as were likely to be frosty. A few that shewed plenty of bloom buds I had taken up, potted, and placed into the greenhouse in September, and they are now in as fine flower, as to size and colour, as ever I had them in June instead of December.

Perhaps no months in the whole year are so unhealthy for Geraniums as November and December, for the weather generally is dark, damp, and rainy, and the plants being full of sappy green leaves, and having received a check from new potting, are often shedding leaves which I constantly remove, or they would become mouldy and give out a bad smell, offensive both to the owners and the plants themselves. At all times during the day I give as much air as possible, by opening the doors, windows, ventilators, &c. In the mornings I have made a fire to dry up damp, but allow it go out before the house is shut up or the remedy would be worse than the disease; close heat at this season being most injurious.

During the severity of winter, fire is necessary to keep out the frost, (when very severe both night and day,) but I am careful not to create damp by watering more than is absolutely necessary. It often happens on frosty days the sun shines clear and bright, and though the air is frosty, I always give air to lower the temperature of the house to admit fresh in and to dry up damps.

In January, I scrape off the top soil of the pots, and have them washed that are green with moss, picking all decayed leaves, trimming off any awkward branches on large plants, and tying up all that require it; then having at hand some light rich soil, I fill up the pots, and finally give a good watering. While they are off the stage, I have it cleaned down, and the house cleaned out, operations which are all conducive to the health, not only of Geraniums, but also of every other family of plants under glass, with the exception of succulents.

As the season advances they will generally begin to show flower buds, and as soon as I observe that, I consider they require potting, especially those in the small pots struck in July; this will mostly happen about the middle or end of March, but such as do not show flower, I do not repot, as that would encourage growth rather than flowering.

I may here state what I conceive to be the best soil or compost

for those plants to flower in; I have found the following to answer admirable: fresh loam from a pasture, cow dung and rotten leaves in equal parts, well mixed and turned over for twelve months. If heath mould is plentiful, I use about one-eighth in addition, which improves the colour of the flowers in potting, I take care to drain them well, and do not fill the pots quite full, which enables me to water them more effectually in the warm drying days of May and June.

In the spring months too much air cannot be given, and in consequence more water is required, which I bestow very liberally, frequently syringing over the whole plants, which refreshes them and prevents insects injuring them, though no kind of insects particularly affects the Geranium, if I except the green fly, which is easily destroyed by tobacco smoke. When the flowering season is over, and I do not want the plants for the flower garden, I cut them down, and as the sap will flow out of the wounds no water is given until the bleeding stops. If they are in too large pots I shake them out, cut off part of the roots, and pot them into less pots which is a sort of renewal of the plants. I take them out of doors as soon as I think the frosts are over to some place sheltered from the sun and west winds, setting them thinly upon a bed of coarse coal ashes two or three inches thick, which prevent worms getting into the pots. During summer I give water when it is required, and keep them clear of weeds, and when I observe they make roots through the holes at the bottom of the pots, I shift them into a fresh place, which is all the care they require until the autumn arrives, when they are sheltered from the frost in the greenhouse or in pits.

3. Flower Garden Management.—Part of the operations of this section has necessarily been described in the two former sections, the propagation and management through the winter being much the same, but as more plants are wanted of particular kinds for the flower garden than for the greenhouse, I find it necessary to preserve a quantity through the cold season in pits; we have here some pits covered with wooden shutters without any glass, which answers very well. On fine mild days the covers are quite removed, but little water is given, and all decayed leaves are removed as they occur, though they do not look quite so fresh and green as those in the greenhouse, yet sufficiently so to be fit to plant out when the proper season arrives. Some are preserved in ashes in the sheds and others hung up in a cool cellar. All these soon recover their verdure when planted out in summer, and those methods may be made use of by such amateurs as may not have the convenience of a greenhouse or pit.

The best season to plant out is about the first week in June, the frost generally being quite over by that time. In planting them out no preparation of the soil is necessary, as they grow quite fast

enough in any kind of soil however poor. In fact they flower much better if they are cramped at their roots, hence I put them out in their pots, plunging them two or three inches deeper than the rims of the pots. During very dry weather they will require watering about every other day, evening being the best time unless frosts in autumn are apprehended.

In arranging them in the beds I find small beds all of one kind look much better than an indiscriminate mixture: not but such an arrangement looks very well, and in some cases is desirable. At the front of the entrance of Sheaf House there is a large plot of ground surrounded on the west side with hardy evergreens, this I fill during summer with geraniums, the largest I plant at the back and gradually lessen to the front. I plant these in a mixture, and certainly they are allowed by every one who has seen them to be very ornamental. During the time they require shelter the place is occupied by hardy evergreens kept in pots for that purpose. No kind of geraniums show better in beds than the old scarlet horse-shoe and its varieties which as they are all nearly of one colour and habit I plant them altogether, and they flower all the summer if kept well watered during dry weather. It perhaps would be desirable to some of your readers to give a few names of such as I have found to do well in the flower garden as bed plants.

Macranthon, a white ground, with pink stripes, flowers all the summer and autumn.

Daneyanum, a crimson, dark striped, flowers all through the season. This beautiful variety was raised by the late Mr. Daney, a florist, near London. It was one of the finest, if not the very finest, of those beautiful hybrid now so common. I have been credibly informed that, after he had bloomed it, Mr. Daney did not sell one until he had increased his stock of it to 200 plants, and then he sold it at 5 guineas a plant, thus realizing 1000 guineas by this still fine variety.

Moor's Victory, shaded scarlet, a good kind both for foliage and flowers.

Flagrans, or *Lord Yarborough*, a crimson shade, flowers freely all the year.

Humeii, A good kind for beds, flowers well all the year, I have it now in flower very fine.

Yeatmanianum grandiflorum, dark blotch, a good kind but rather small foliage, flowers well.

Grandissima, rose, dark spot, a large flower, makes large trusses and flowers all the year, a truly fine variety.

All these may be had of any respectable nurseryman from 6d. to 1s. each.

I have now described to you my method of cultivating *Pelargoniums*. Perhaps some of your readers may think me tedious, and

unnecessarily particular, but, to such, I shall only say that if you wish to succeed, you must take pains, and in proportion to the pains bestowed will be the success. To those who may think proper to adopt my plan as far as circumstances will allow, I will say persevere and you will succeed as I have done. My employers are satisfied, I obtained last year a great number of prizes at the Sheffield Horticultural Society.

ARTICLE VI.—ON THE CULTURE OF CYCLAMENS.

BY C. B. B.

IF by the sweet-scented Cyclamen (F. C. 1837, page 20,) Alpha means, the common Cyclamen Persicum, white with a crimson eye, it is so easily cultivated, that the wonder rather is, how he can have so mis-managed, without killing it, as to prevent it from flowering for three years. To grow it in perfection, the root should be placed just on the surface of a compost of equal parts of sandy loam, leaf mould and rotten cow dung, in a well drained pot, which diameter is nearly double that of the root itself, and placed in a light and airy situation, where it has little more than protection from frost. When it dies down, about June, the plant should be set aside in a cool place without water, till the end of August, when it may be replanted as above. I have found the following plan, recommended by Mr. Paxton, effective, though the reason for it is not obvious. Soon after the plants die down, I turned them into the open border, and allowed them to remain, until the nights began to be chilly, towards the end of September. By this time they had made both leaves and flowers buds, which soon expanded, when the roots were taken up, and potted as above. If the plants are kept in a close damp, or dark place, they will never flower.

The directions above apply nearly to all the genus, except that *C. coar* requires peat, and *C. repandum* is always difficult to keep when dormant. The common sweet scented Cyclamen, of South Europe, a rose coloured species, prefers more sandy leaf mould, and will bear any thing except frost, and a wet soil. It grows profusely in the Italian Islands, on the mossy banks which bound the vineyards.

ARTICLE VII.—ON FRAXINELLA, OR WHITE DITTANY.

BY A FLORIST.

Fraxinella is a living plant, that multiplies by its roots, as well as by its seed. We sow it in September, in naked earth, or in beds: if in naked ground, we take the precaution to choose a proper place, which is always at the end of a plot well loosened, and tractable, and covered with mould to the depth of an inch. There we sow it, either all over the surface of that narrow space, or in traces drawn by the line, at the distance of three inches from one another; then we cover it up with the same mould, as even as we can.

When the plant thus sown, comes up, if the season be very cold, cover the young sprouts with big straw, or dry dung. When it is good fair weather, uncover them in the day-time, and cover them up at nights.

When the Spring comes, water them, and weed them, as you see occasion; and when they are big enough to be set in their proper places, take them gently out of the ground, towards the end of March; carry them to the places appointed for them, and plant them according to art; remembering always the directions I gave above, of the way of planting Flowers of the large kind. Take care to guard their roots well with earth; water them, and after that, water and weed, as you see occasion; and, in the proper season, the flower will answer all expectations.

Fraxinella is a plant that shoots from its roots, stalks about two feet high, reddish, guarded with oblong leaves, ranged by pairs on one side, which terminates in one leaf. The summit of the stalks, bears flowers in the form of a spica, or ear; each of which consist of five leaves, of a purplish white colour, and variegated; in the middle of which, rises eight or ten purplish stamina, or therads.

After the flowers fall, there succeeds a fruit, composed of several grains, containing seeds pointed at one end, and of a shining black colour.

ARTICLE VIII.

A LIST AND DESCRIPTION OF GREENHOUSE AND HARDY CLIMBING PLANTS.

BY MR. JAMES BROWNE, DERSINGHAM, NORFOLK.

Having observed in the last number of the *Floricultural Cabinet*, a request of "Floras" to your correspondents, for a list of Greenhouse and Hardy Climbing Plants, I have endeavoured to comply, by sending the following for insertion, trusting that it will be found useful to your numerous readers:—

ABBREVIATIONS.

gh. greenhouse	climb. climbing, as Clematis.	decid. deciduous.	} whether shrubby or herbaceous
f. frame	twing. twining, as Ipomœa.	everg. evergreen	
.... the same			

<i>Systematic Name.</i>	<i>Specific character.</i>	<i>Medium ht. in feet.</i>	<i>Time of flowering</i>
Ampelopsis, class 5, order 1, natural order Ampelideæ.			
cordata	climb. deciduous	20	April, May
hederacea	.. ..	60	June, July
hirsuta	.. ..	60	April, May
Aristolochia, cl. 20, or. 3, Asarineæ.			
sipho	twining deciduous	30	June, July
tomentosa	.. ..	20	.. ..
Arkansa	.. ..	20	.. ..
Asparagus, cl. 6, or. 1, Asphodeleæ			
scandens	gh. twining	6	May, June
Astephanus, cl. 5, or. 2, Asclepiadeæ.			
triflorus	gh. twining	4	July, August
Atragene, cl. 13, or. 6, Ranunculaceæ.			
austriaca	climb. deciduous	8	June, July
americana	.. ..	12	May, June
ochotensis	.. ..	12	May, July
Bignonia, cl. 14, or. 2, Bignoniaceæ.			
capreolata	climb. evergreen	20	July, August
Billardiera, cl. 5, or. 1, Pittosporæ.			
scandens	gh. evergreen	12	June, August
longiflora	.. ....	15	June, September
fusiformis	.. ....	8	.. ....
Brunnichia, cl. 8, or. 3, Polygoneæ.			
cirrhusa	gh. evergreen	6	June, July
Calampelis, (Eccremocarpus) cl. 14, or 2, Bignoniaceæ.			
scabra	climb. f. everg.	15	July, September
longiflorus	.. .. ....	12	.. ....
Caprifolium, cl. 5, or. 1, Caprifoliaceæ.			
italicum	twining decid.	12	May, June
etruscum	.. ..	20	.. ..
sempervirens	twining everg.	16	May, September
gratum	.. ..	20	June, August
pubescens	.. decid.	20	May, June
Periclymenum	.. ..	15	.. ..
japonicum	f. .. everg.	12	July, September
flexuosum	.... ..	20	.. ....
Douglasii	.. decid.	15	.. ....
longiflorum	.. ..	20	.. ....
occidentale	.. ..	20	June, August
Celastrus, cl. 5, or. 1, Celastrineæ.			
bullatus	climb. decid.	20	June, July
scandens	.. ..	15	May, June
punctatus	gh. evergreen	6	June, August
Clematis, cl. 13, or. 6, Ranunculaceæ.			
Flammula	climbing decid.	20	July, October
Massoniana	gh. .. everg.	16	June, September
glauca	.. decid.	12	April, May
chinensis	f. .. everg.	12	.. ..
australis	gh. ..	12	.. ..
Viorna	.. decid.	12	September
Simsii	.. ..	8	....
florida	f. ..	10	April, Sept.
Viticella	.. ..	20	September
cirrhusa	.. everg.	12	March, April
balearica	f. ..	12	February March
odorata	gh. ..	10	.. ..
Cobæa, cl. 5, or 1, Cobæaceæ.			
scandens	gh. .. everg.	30	June, September
Convolvulus, cl. 5, or. 1, Convolvulaceæ.			
pannifolius	gh. twining everg.	15	June, September

<i>Colour of Flower.</i>	<i>Native Country.</i>	<i>Date of Introduction.</i>	<i>Soil and Propagation.</i>
Green	N. America	1803	Cuttings
....	....	1629	....
....	....	1806	....
Yellowish	N. America	1763	Layers, sandy peat
Purple	....	1799	....
....	Arkansa	1824	.... peat and loam
Green	C. of G. Hope	1795	Cuttings of root, sand and peat
White	C. of G. Hope	1816	Division peat and loam
Blue and Yell.	Austria	1792	Layers, sandy loam
Purple	N. America	1797	....
White	Siberia	1818	....
Scarlet	N. America	1710	Cuttings, peat and loam
Crimson	N. S. Wales	1790	Seed or cuttings, sandy peat
....	Van D.'s Land	1810	....
Blue	....	1823	....
Pink	Carolina	1787	Cuttings, loam and peat
Orange	Chili	1824	Cuttings or seed, loam and peat
Yellow	Peru	1825	....
R. Yellow	England		Cuttings
Orange	Italy		....
Scarlet	N. America	1656	.... loam and peat
Red	....	1730	....
Yellow	Canada	1822	....
R. Yellow	Britain		....
Red	China	1806	.... peat and loam
Orange	....		....
....	N. America	1824	....
Yell. and white	China	1826	.... loam and peat
Orange	Ft. Vancouvre	1824	.... peat and loam
White	Virginia	1759	Layers, peat and loam
Yellow	N. America	1736	....
Whitish	Japan	1837	Cuttings
White	France	1596	Layers
....	C. of G. Hope		.... sandy peat
Whitish	Siberia		....
....	China	1820	....
White	N. Holland	1821	.... peat and loam
Purple	N. America	1730	....
....	....	1812	....
Whitish	Japan	1776	....
Purple	Spain	1569	Seed
Whitish	....	1596	Layers
....	Minorca	1783	....
Purplish	E. Indies	1831	Seed, loam and peat
Purple	Mexico	1792	Seed, cuttings, peat and loam
Blue	Canaries	1805	Division of root, peat and loam

<i>Systematic Name.</i>	<i>Specific character</i>	<i>Medium ht. in feet.</i>	<i>Time of flowering.</i>
<i>Convolvulus farinosus</i>	.. .. .	10	May, June
<i>Hermannia</i>	.. .. .	6	August, Sept.
<i>Decumaria</i> , cl. 11, or. 1, <i>Myrtaceæ</i> .			
<i>sarmentosa</i>	twining decid.	30	July, August
<i>Dumasia</i> , cl. 17, or. 4, <i>Leguminosæ</i> .			
<i>pubescens</i>	gh. twining everg.	6	August, Dec.
<i>Eustrephus</i> , cl. 6, or. 1, <i>Asphodeleæ</i> .			
<i>angustifolius</i>	gh. twining everg.	4	June, July
<i>latifolius</i>	.. .. .	4	.. ..
<i>Gelsemium</i> , (<i>Bignonia</i>) cl. 5, or. 1, <i>Apocynæ</i> .			
<i>sempervirens</i>	climbing everg.	6	June, July
<i>Hedera</i> , cl. 5, or. 1, <i>Araliaceæ</i> .			
<i>helix</i>	climbing everg.	20	October, Nov.
<i>canariensis</i>	.. .. .	15	.. ..
<i>Hibbertia</i> , cl. 13, or. 3, <i>Dilleniaceæ</i> .			
<i>volubilis</i>	gh. twining everg.	8	May, October
<i>grossulariæfolia</i>	.. .. .	6	March, August
<i>Ipomæa</i> , cl. 5, or. 1, <i>Convolvulaceæ</i> .			
<i>sinuata</i>	gh. twining everg.	6	July, August
<i>carolina</i>	.. annual	10	.. ..
<i>cærulea</i>	.. .. .	9	.. ..
<i>coccinea</i>	.. .. .	10	.. ..
<i>purpurea</i>	.. .. .	12	.. ..
<i>Jasminum</i> , cl. 2, or. 1, <i>Jasmineæ</i> .			
<i>azoricum</i>	gh. climb. everg.	6	April, August
<i>revolutum</i>	.. .. .	12	.. ..
<i>officinale</i>	climb. decid.	20	.. ..
<i>grandiflorum</i>	gh. . . everg.	12	June, October
<i>Kennedia</i> , cl. 17, or. 4, <i>Leguminosæ</i> .			
<i>rubicunda</i>	gh. twining everg.	10	March, August
<i>coccinea</i>	.. .. .	12	.. ..
<i>comptoniana</i>	.. .. .	10	.. ..
<i>Lophospermum</i> , cl. 14, or. 2, <i>Scrophularinæ</i> .			
<i>erubescens</i>	f. climbing	12	June, October
<i>rhodochiton</i>	.. .. .	15	.. ..
<i>Menispermum</i> , cl. 22, or. 10, <i>Menispermæ</i> .			
<i>canadense</i>	twining	10	June, July
<i>Lyoni</i>	climbing	10	.. ..
<i>Passiflora</i> , cl. 16, or. 2, <i>Passifloreæ</i> .			
<i>cærulea</i>	twining everg.	30	June, October
<i>maculata</i>	f. . . .	4	.. ..
<i>incarnata</i>	.... ..	20	.. ..
<i>Periploca</i> , cl. 5, or. 2, <i>Asclepidææ</i> .			
<i>græca</i>	twining decid.	12	July, August
<i>Petunia</i> , cl. 5, or. 1, <i>Solanææ</i> .			
<i>phænicea</i>	f. climbing	6	June, October
<i>Sollya</i> , cl. 5, or. 1, <i>Pittosporææ</i> .			
<i>heterophylla</i>	f. climbing	8	June, September
<i>Tecoma</i> , (<i>Bignonia</i>) cl. 14, or. 2, <i>Bignoniaceæ</i> .			
<i>australis</i>	f. climb. everg.	10	April, July
<i>radicans</i>	.. decid.	30	July, August
<i>grandiflora</i>	gh. . . everg.	20	.. ..
<i>capensis</i>	f. . . .	10	.. ..
<i>Vitis</i> , cl. 5, or. 1, <i>Ampelideæ</i> .			
<i>dentata</i>	climb. decid.	10	June
<i>cordifolia</i>	.. .. .	12	.. ..
<i>Wistaria</i> , (<i>Glycine</i>) cl. 17, or. 4, <i>Leguminosæ</i> .			
<i>frutescens</i>	twining decid.	10	June, September
<i>Consequana</i>	.. .. .	15	.. ..

<i>Colour of Flower.</i>	<i>Native Country.</i>	<i>Date of In- troduction.</i>	<i>Soil and Propagation.</i>
Pink	Maderia	1777	.....
White	Peru	1799	..... rich earth
White	Carolina	1758	Layers, peat and loam
Yellow	Nepal	1824	Cuttings, sandy loam
Red	New S. Wales	1820	Cuttings, sandy peat
..	....	1800	.....
Yellow	N. America	1540	Cuttings, peat and loam
Green	Britain		Layers
....	Canaries		.....
Yellow	New S. Wales	1600	Cuttings, sandy peat
...	New Holland	1803	.....
White	Florida	1817	Seed, sandy loam
Purple	Carolina	1732	.....
Blue	E. Indies	1818	.....
Scarlet	W. Indies	1713	.....
Purple	S. America	1699	.....
Yellow	Madeira	1724	Cuttings, rich loam
...	E. Indies	1812	.....
White	...	1548	.....
..	...	1629	.....
Brown	New S. Wales	1788	Cuttings, sandy peat
Scarlet	N. Holland	1803	.....
Blue	....	1803	.....
Rose	Ialapa	1820	Cuttings, Seed, rich loam
Dark Purple	Mexico	1833	..... peat and loam
Green	N. America	1691	Division of root, peat
White	....	1823	.....
Blue	Brazil	1699	Cuttings, sandy loam
Spotted	N. America	1812	.....
Pink	....	1629	.....
Brown	Syria	1597	Division of root, sandy loam
Purple	Rio de la Plata	1831	Cuttings, seed, peat and loam
Blue	N. Holland	1832	Cuttings. seed, loam and peat
Orange	New S. Wales	1795	Cuttings sandy peat
...	N. America	1640	Division of root, sandy peat
...	China	1800	Cuttings, rich loam
...	C. of G. Hope	1823	.....
Green		1820	Cuttings, rich loam
...	N. America	1806	.....
Purple	N. America	1724	Layers, sandy peat
Blue	China	1818	..... rich loam

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. *CRATÆGUS FLAVA*, Var. *Lobata*. Rough barked Thorn, single fruited variety. (Bot. Reg. 1932.) Natural Order, Roseacæ; Class, Icosandria; Order, Pentagynia. The original species produces its fruit in clusters, but in the present variety they are solitary. They are of a greenish-yellow, slightly tinged with pale red at the end. The plant forms a compact spreading head. The bark splits very much like that of an elm tree. *Cratægus*, from *Kratos*, strength, alluding to the density of the wood.

2. *CRATÆGUS OXYACANTHA*, Var. *Oliveriana*. Hairy-leaved Black Hawthorn. This variety of the common Hawthorn very much resembles the original species. Its berries are produced in large clusters, but are of a sloe-black colour, producing a pretty appearance. It is stated that the plant is a native of Asia Minor.

3. *GAILLARDIA BICOLOR*, Var. *Drummondii integerrima*. Two coloured Gaillardia. Drummond's entire leaved variety. (Bot. Mag. 3551.) Compositæ; Syngenesia; Frustranea. This variety appears identical with *Gaillardia picta*, excepting all the leaves being entire. The fine large blossoms, more than two inches across, the large crimson disk, surrounded by a ray of fine yellow, produces a very showy appearance, and renders the plant well deserving a place in every flower garden. *Gaillardia*, in compliment to M. Gaillard de Marentonneau, an amateur botanist.

4. *HIPPEASTRUM BREVIFLORUM*. Short flowered Knight's-Star Lily. (Bot. Mag. 3549.) Amaryllidæ; Hexandria; Monogynia. Mr. Tweedie found this very distinct species in the neighbourhood of Buenos Ayres. The scape rises about three feet high, bearing an umbel of six handsome flowers. Each flower is about four inches across, white striated with red, and down the middle of the petal, at its lower part, is a stripe of yellow. It is a very handsome species, and well merits a place in every collection of liliaceous stove plants. It has bloomed at the Glasgow Botanic Garden.

5. *LACHENALIA GLAUCINA*. Glauous flowered. (Bot. Mag. 3552.) Asphodelæ; Hexandria; Monogynia. This very handsome species has been sent by Baron Ludwig from Cape of Good Hope to the Glasgow Botanic Garden. The scape rises near a foot high, producing a spike of numerous flowers. They are at first of a palish blue, changing, however, as they become older, to a rosy-lilac. The perianth (calyx) is also coloured, and prettily spotted with blue. There are two varieties of this plant, one having pale blue flowers, and plain leaves; the other having lilac or rose coloured flowers, and spotted leaves. *Lachenalia*, in compliment to W. de la Chenal, a botanical Author.

6. *LIMNANTHUS DOUGLASSII*. Mr. Douglas's Limnanthes (Bot. Mag. 3554.) Limnanthæ; Decandria; Monogynia. A native of California, from whence it was sent by Mr. Douglas. The plant is annual, quite hardy, decumbent, stems growing ten or twelve inches long. The ends are crowded with numerous fragrant flowers, each about an inch across, much resembling in size and form the *Nemophila grandiflora*. A large portion of the flower is a deep yellow, the extremities of the petals being white. It blooms from June to August. *Limnanthes*, from *lumen*, a lake; and *anthos*, a flower. The plant, probably, in its native habits growing by the sides of lakes, rivers, &c.

7. *LOBELIA CARDINALIS*; var. *MILLERI*. Mr. Miller's *Lobelia*. (Brit. Flow. Gard. 372.) Lobeliacæ. Pentandria; Monogynia. A very handsome flowering variety, raised by Mr. Evans, gardener to Mrs. Batt, Newhall, Salisbury, Wiltshire. It is an hybrid between *L. cardinalis*, and *L. syphilitica*. The plant is perennial, quite hardy, blooming from July to the end of the summer season. The stem rises three feet high, having a long raceme of flowers, of a lively purple colour, darker up the centre of the petals. The plant deserves a place in every collection. Plants may be had at the public Nurseries. A number of very fine flowering hybrid Lobelias have recently been raised, and will be offered to the public this spring. (See Messrs. Godwin's Advertisement in February Cabinet.) They are highly ornamental, and great acquisitions to the

flower-garden. *Lobelia*, in compliment to M. Lobel, a celebrated botanical Author and Physician: he died in 1616.

8. *LOBELIA POLYPHYLLA*. Many-leaved. (Bot. Mag. 3550.) A native of Valparaiso, from whence it has been recently sent to this country, and bloomed in the Glasgow Botanic Garden. Mr. Knight of Chelsea also possesses plants of this species. The plant is perennial, suffruticose, growing a foot high, branching, each producing a terminal raceme of flowers, of a deep blood purple colour, producing a beautiful appearance. The plant ought to be in every flower-garden.

9. *MENONVILLEA FILIFOLIA*, Thread-leaved. (Brit. Flow. Gard. 371.) Crucifera. Tetrastynamia; Siliculosa. A hardy annual plant, a native of Chile, from whence it appears to have been sent to the Imperial Botanic Garden, at St. Petersburg, and from thence sent to A. B. Lambert, Esq. Boyton-House, Wiltshire, where it bloomed the last summer. The stems grow erect, about a foot high, each terminating in a longish raceme of flowers. The flowers are small, having very narrow petals, white. There are several other species of this genus, all natives of Chile. *Menonvillea*, in compliment to M. Thierry Menonville, an enterprising Naturalist of France.

10. *MUSCARIA COMMUTATUM*. Dark Purple Flowered Grape Hyacinth.—(Brit. Flow. Gard. 369.) A native of Italy and Sicily, where it grows frequent in the meadows. The flowers are produced in dense racemes about twenty in each, of a dark purple colour. It is grown in the gardens of the Honourable W. T. H. Fox, Strangways, Abbotsbury Castle in Dorsetshire. The plant blooms in March and April. The flowers are scentless. *Muscaria*, from *moschos*, alluding to the order of the type.

11. *NEPENTHUS DISTILLATORIA*. Distilling Pitcher Plant. Pax. Mag. Bot.) This very singular plant is a native of the East Indies, and was introduced into this country in 1789. It was subsequently lost, but the late Dr. Carey gathered seeds of it near Bengal, on the Circar Mountains, who sent some to Mr. Cooper, of Wentworth. A very fine plant is now growing in the stove at Chatsworth, which has near fifty pitchers upon it. The plant has bloomed for eighteen months past. The flowers, which are numerous, are produced upon a raceme of eight or nine inches long.

12. *ONCIDIUM LUNATUM*, Crescent-lipped. (Bot. Reg. 1929.) Orchidaceæ: Gynandria; Monandria. This very neat flowering species bloomed in the collection of Messrs. Loddiges, during the last summer. It is a native of Demerara. The spike rises about nine inches high. The flowers very much resemble those of *O. Harrisonianum*. Each is about three quarters of an inch across. The labellum is white striped, with dark blood colour. The other portion of the flower is yellow, spotted with brownish-red.

13. *PERESKIA ACULEATA*. West India Gooseberry. (Bot. Reg. 1928.) Cactaceæ; Icosandia; Monogynia; Synonym, *Cactus Pereskia*. This plant is an old inhabitant of our hot-houses, but seldom seen in bloom, often used as a stock, on which other kinds are inarched or grafted. The plant produces its flowers in a panicle of ten or more upon each. They are white, rather more than an inch across, and make a very pretty appearance. A fruit is produced much like a soft mellow Gooseberry. *Pereskia* from N. F. Peireskin's, an Amateur Botanist.

14. *SPIRANTHUS BRHTEOSA*. Long Bracted Lady's Traces. Orchidaceæ: Gynandria; Monandria. (Bot. Reg. 1934.) A stove herbaceous species of Orchidææ, belonging to the division Neottieæ. It was sent to Messrs. Loddiges' from St. Catharines. The scape rises about a foot high, terminating in a spike of flowers. They are very small, of a pale yellow colour. *Spiranthes*, alluding to the spiral manner that the flowers are produced in.

15. *TROPEOLUM BRACHYSERAS*. Short Spurred Indian Cross. (Brit. Flow. Gard., 370.) We have already given some particulars respecting this pretty little plant, under the specific name, *Brachysema*, which, by some mistake, we had so inserted it. It appears the proper specific title is as now given. We introduce it in this place to correct the mistake.

16. *TULBAGHIA VIOLACEA*. Violet-flowered. (Bot. Mag., 3555.) Liliacæ; Hoxandria; Monogynia. A native of Southern Africa. The scape rises about a foot high, producing an umbel of eight or nine flowers, of a bright shining purple colour. Each flower is about three quarters of an inch across. *Tulbaghia*, in compliment to M. Tulbagh, a Dutch Governor.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

A LIST OF THE BEST HARDY EVERGREEN AND DECIDUOUS SHRUBS.—I shall be much obliged by a list of the best Hardy Evergreen and Deciduous Shrubs, to include the Camellias, Magnolias, and those shrubs which have been introduced for the last few years, fit for small gardens; and if the height, time of flowering, and prices would be given, it would be very acceptable to myself as well as others. The list of plants given in November, by Mr. Brown, was a very excellent one, and wanted the prices only to make it complete. A similar list for the greenhouse would be equally acceptable. PEDRO.

London, January 25th, 1836.

SUPERIOR PANSIES.—A reader of the *Cabinet* would be much obliged by a list, and description of colours, of forty of the best kinds of Pansies most suited for cultivating for prize flowers, to be exhibited at the Floricultural Meetings. An early attention to this request, by a connoisseur of Pansies, will be a very great favour conferred on AN OLD SUBSCRIBER.

Brompton, Jan. 20, 1836.

A LIST OF ONE HUNDRED FLOWERS &c.—A new Subscriber will be particularly obliged, if some Correspondent, will insert in as early a number as possible of the *Cabinet*, a list of flowers, &c., suitable for a garden 100 feet by 21, in rather an open situation, with a south aspect, and northern side of London. The list to contain only those flowers that a mere novice can attend to, with as good a succession of flowers as possible. A NEW SUBSCRIBER.

Jan. 23rd, 1837.

The garden is in some places shaded by fruit trees—please to say, therefore, what will grow under them.

DOUBLE FLOWERED CLARKIA.—Seeds of a double variety of this pretty plant are advertised in the *Cabinet*, for sale by Mr. Kernan. I have never heard of it before, but certainly it must be an acquisition to the flower garden, well deserving a place in all. Can any reader of the *Cabinet* inform me where it has been raised, and if it has bloomed in this country. J. KING.

Blackheath.

ROSA HARDII.—I have been informed that a new Hybrid Rose, raised in Germany, and named Rosa Hardii, produces golden coloured flowers, having a dark purple eye. I should be glad to be informed by any reader of the *Cabinet* who may have seen the flower, whether it be a double or single flowering variety, and where, in this country, plants may be purchased. ROSA.

Cheltenham Feb. 6th, 1837.

We refer our Correspondent to apply, immediately, to Messrs. Wood and Son, Maresfield, near Uckfield, Sussex, for the kind, if it be wished to have the plant for blooming the coming season. (See their list in the *Cabinet* for February.) CONDUCTOR.

THE DOUBLE BLOSSOMED CHINESE PRIMROSE.—Information has recently been given me, (but I have entirely forgot by whom) of a double blossomed Chinese Primrose. If some Correspondent of the *Cabinet* will inform me where it can be procured, and the price per plant, it will very much oblige.

Bath, Feb. 7th, 1837.

A LADY.

Mr. Henderson, nephew of Mr. Henderson Nurseryman, Pine Apple Place Edgware Road, London, succeeded in raising a double flowering variety, having fringed petals. We understand plants are offered for sale at the above named nursery. CONDUCTOR.

ANSWERS.

ON HEATING BY HOT WATER IN GLASS TUBES, 1836, p. 215.—R. must be under some mistake respecting glass tubes, employed in hot water apparatus as is statement that they give out heat quicker, and retain it longer is self-contradictory, to say nothing about the affording a higher temperature. The subject was most accurately investigated by Mr. T. Tredgold, some years ago. The result was, that water in a glass tube gives off its heat rather more slowly than in an iron one—in the ratio of 155, 180, where the iron is covered with rust, as hot water pipes generally are—consequently iron pipes give out heat quicker, and under equal areas of external surface, produce a higher temperature than glass would, and of course the heat contained in them is more rapidly expended. With respect to glass tubes, the difficulty and expense of joining them, would probably prove an insuperable objection to their use, if their brittleness were not a sufficient one.

ON THE HEAT OF A FURNACE, &c., 1836, p. 137.—I see a Correspondent at Canterbury, is incredulous as to the time which the little furnace mentioned in page 46, continues to burn. The fact, however, was as stated, and since that time, another furnace smaller than the former, as having rather less diameter and conical, has remained alight without any attention an equal time. Whenever it is filled with fuel and regulated, it burns untouched, twelve hours, and only requires stirring up to put it to work in the morning. It must, however, be observed, that the combustion for a great part of this time is so slow as to produce very little heat.

ON GROWING CAPE BULBS IN THE OPEN GROUND, page 1836, p. 137.—may be glad to be informed, that notwithstanding all that is said about growing Cape Bulbs in the open ground, those who attempt generally lose their plants, or if they succeed, the flowers are so indifferent as ill to reward the trouble. A few strong species succeed, but the wet of our autumns destroys most kinds, and the frosts cut up those which survive. If he will try, he must drain his beds well, raise them high, and protect them from all rain after October begins.

C. B. B.

REMARKS.

A LIST OF FIFTY EXCELLENT SORTS OF DAHLIAS.—I forward you the requested list of Fifty Dahlias, together with a few others which are spoken of in the highest manner, but not having seen them, I have omitted them in my list; those to come out this season, and which I have placed amongst the fifty, I have seen, and can highly recommend. Quilled Perfection must be considered a first-rate flower, and Sir H. Fletcher, Dodds's Mary, and Jones's Sulphuria Elegans, unequaled. I speak thus favourably of the latter, from the bloom exhibited at Salt Hill last year, which was splendid. Addison must also be in every collection, and will, I think, find itself a place in every good stand of blooms. I should remind growers that this is Granta's year, it having been generally remarked that this splendid flower is in perfection only every other

ON SPOTTED LEAVES OF ORCHIDÆ.—A Correspondent in one of your late numbers, complains of spots in the leaves of his Orchidæ, which do not appear to be caused by insects. As I have found that cold, especially during the night, when there is moisture on the leaves, affects many tender stove plants in the way he describes. I think it is possible his Orchidæ have suffered from that cause—a temperature much below 65 degrees, especially during summer, when the heat by day is great, will generally cause spots.

C.B.B.

TO DESTROY SLUGS, WOODLICE, EARWIGS, &c.—Take some cabbage leaves, and either put them in a warm oven, or hold them before a fire, until they are soft, then rub them with salted butter, or any kind of fresh dripping, and lay in the places infested.

JACOBUS.

season. In 1835 it was in every stand; last year, I do not remember seeing a good bloom. In my list I may, perhaps, have excepted several flowers which I have admitted; indeed, I see that the Editor of the Gardeners' Gazette condemns Ariel and Glory, declaring them hardly worthy of admittance amongst an 100, but as this gentleman seems rather eccentric in his likes and dislikes, I am not inclined to pay particular attention to him.

PENSEE.

Dodd's Mary	Calypso
Springfield Rival	Metropolitan Roselle
Sir H. Fletcher, Richardson's	Piltown Rival
Quilled Perfection, Brown's	Ariadne, Brown's
Addison	Warminster Rival, Wheeler's
Countess of Sheffield	Venosa, do.
Sulphuria Elegans, Jones's	Dr. Halley
Perfection, Widnall's	Glory
Granta, do.	Ariel
Corinne, Brown's	Yellow Perfection, Stones's
Triumphphant, Jefferies'	Blue Beard
Countess of Moreton	Lydia, Brown's
Mary Queen of Scot's, Leod's	Queen of Dahlias
Metropolitan Blush	Ada Byron
Mrs. Wilkinson	Countess of Liverpool
Napoleon, Smith's	Fisherton Rival
Purple Perfection, Squibb's	Pink Perfection
Diadem of Flora	Burgundy
King Otho	
Beauty of Camberwell	Girling's Ruby
Angelina	Suffolk Hero
Sir E. Sugden	Madonna
Polyphemus, Elphinston's	Mrs. Broadwood
Lilac Perfection	Lady of Oulton
Hermione	Surpass Polyphemus
The Gem, Brown's	Nulli Secundus
Beauty of Dulwich	Beauty, Brown's
Perfection, Sutton's	St. Leonard's Rival
Royal Adelaide, Clark's	Countess of Jersey
Metropolitan Perfection	King of Beauties
Hon. Mrs. Harris, Squibb's	Conqueror of Europe
Aurora, Maule's	

ON THE AROMA OF FLOWERS.—Before R. T. W. can expect an answer to his query, December Number, 1836, page 292, concerning "aroma of flowers," he must explain its meaning.

C. B. B.

ON THE GERMINATION OF OLD SEEDS.—The germination of seed, supposed to have lost their vegetative principle, may be greatly accelerated by immersing them in Oxalic Acid, or putting them in a cloth moistened with the acid. They are not to remain in the cloth any longer after the germination has commenced. By attending to the foregoing, seeds have vegetated after being kept thirty years.

Jau. 25th.

JACOBUS.

EUPHORBIA JACQUINIFLORA.—In December last year, I had the pleasure of walking through the superior collections of Exotics in the nursery of Mr. Lowe, of Clapton, and one plant particularly arrested my attention, viz. Euphorbia Jacquinii. It produces a large head of scarlet bractæ, that may be termed its flowers, which are splendid and showy. It deserves a place in every hothouse in the country. The season of its blooming, length of time I was informed it bloomed, several months, alike contribute to make the plant desirable.

Ealing, Jan. 3d, 1837.

J. A. SMITH.

ON THE PASSION FLOWER.—As you expressed a wish to receive my small communications, I forward them in time, I hope, for the February number. I am much obliged for your answer respecting the Billiardiera Melocarpa, and hope always to receive so speedy a reply.—The name Passion Flower is derived from

the Latin, "flos passionis," originally given to the plant by the Spaniards, from its supposed resemblance to the instruments of the Crucifixion of our Saviour. When they first discovered America, and found a flower seeming to represent so closely circumstances of so sacred a nature, they attached the most superstitious ideas to it. I have read that, in old botanical works, very curious prints are to be met with, in which the flowers seem to be composed of the things themselves, being evidently portrayed from the exaggerated accounts of the first discoverers, who saw in the five anthers, our Saviour's five wounds; in the three styles, the nails by which he was fixed to the cross; in the column which rises from the base of the flower, the pillar to which he was bound. The resemblance appeared to the Roman Catholics so strong, that the name of Passion Flower was bestowed on it; and it is now held in such veneration in South America, that the Nuns train it with very reverential feelings round the windows of their little dormitories."—I copied this out of a very nice little book for beginners in Botany, by C. A. Halstead, which seems to me much the clearest and nicest work of the sort I have ever seen, and I should recommend it to any beginner in the science. If you think this worth inserting for the amusement of your readers,

You will much oblige,

Dec. 30th, 1836.

KALMIA.

A LIST OF FIFTY EXCELLENT KINDS OF DAHLIAS.—With this I send you a list of fifty superior Dahlias. I saw blooms of them at the various exhibitions around London and in the country, during the last season. The plants may not all be the best bloomers, as to quantity produced. I had not an opportunity of seeing some of them grow, but I can vouch for the superior form of the blooms, which I saw at the first-rate exhibitions, all of which obtained many prizes. I would furnish a list for the *Cabinet*, how many times I saw each sort in the winning stands, but fear it be too lengthy an article.

Marquis of Northampton, Elphinstone's	Bristol Perfection
Duke of Devonshire, Widnall's	Middlesex Rival, Pamplin's
Sir Edward Sugden	Quill'd Perfection, Brown's
Countess of Orkney	Piltown Rival, Mitchell's
Ada, Gaines's	Rival Sussex
Mary, Dodds's	Countess of Jersey, Gaines's
Roso Superba, Elphinstone's	Elis
Conqueror of Europe, do.	Scarlet Perfection
Paragon, Marsh's	Miss Georgiana
Goldfinder, Dray's	Queen's Superba, Wilmer's
Malibran, Kingston's	Queen of Trumps, Elphinstone's
Mrs. Broadwood, Elphinstone's	Lady Dartmouth, Widnall's
Sulphurea Elegans, Jones's	Penelope, Chubb's
Ruby, Girling's	New Scarlet Perfection, Holman's
King Harold, Dray's	Mrs. Wilkinson, Penny's
Shakespear, Girling's	Napoleon, Smith's
Lord Lyndhurst, Forsyth's	Countess of Sheffield, Mantel's
Purple Perfection, Elphinstone's	Lilac Perfection
Warminster Rival, Squibb's	St. Leonard's Rival, Stanford's
Maid of Judah, Kingston's	Alexander the Great, do.
Enterprise	Victorious, Kingston's
Salter, Mitchell's	Paris, Widnall's
Sir H. Fletcher	Magnet, Kingston's
Champion, Wells's	Ipswich Beauty
Incomparable White	Madonna, Stanford's

In the above list will be found high-priced kinds, if all be offered for sale this season, which I am not aware of, not having looked through the published lists. To those persons who wish for superior kinds, at a lower cost, the catalogues published give a pretty correct statement of sorts. What I saw were exhibited at Bristol, Bath, Cheltenham, Vauxhall, Salt Hill, Cambridge, Twickenham, and a few other minor exhibitions.

Near London, Feb., 1837.

A CLERGYMAN, J. . S.

SEEDLING DAHLIAS,

RAISED BY J. KINGTON, STOWELL, NEAR CORSHAM, WILTS.

INCOMPARABLE WHITE.—Good show flower, and can be depended always to come good; it obtained the 1st prize for seedlings at the Bath Show, Sept. 15th, and the 1st for seedlings at the Rodborough Show, Sept. 23rd, 1836.

MALLIBRAN.—Fine white edged with rosy pink, obtained the 1st prize for seedlings of any colour at the Chippenham Show, Sept. 9th; and the 1st for edged seedlings at the Hungerford Show, Sept. 30th, 1836.

MAGNET.—Dark crimson, striped with light, fine cup petals, extra good shape; took the 1st prize for striped seedlings at the Hungerford Show, Sept. 30th.

ROSEBUD.—Beautiful shaped, rose cupped petals, obtained the 1st prize for Selfs, at the Hungerford Show, Sept. 30th, 1836.

MOON-BAKER.—Fine purple, good show flower.

NIMROD.—Good rosy bronse, fine cup petals, show-flower.

KINGTON'S VICTORIOUS.—Beautiful light rose, extra good shape, cup petals; this variety obtained the 1st prize for selfs at the Salisbury Grand Show, Sept. 21st and 22nd for any colour at the Rodborough Show, Sept. 23rd, 1836.


MAID OF JUDAH.—Fine cream and buff excellent show-flower, every flower come perfect.

VICTOR HUGO.—Fine dark purple, good shape.

VATHEK.—Dark purple, Springfield shape.

December, 1836.

J. KINGTON.

 The above kinds are offered for sale by C. W. HARRISON. (See List Advertized.)

MEETING OF BOTANICAL SOCIETY, FEB. 2nd.

J. E. GRAY, Esq., F.R.S., President, in the Chair.—A paper was read from Mr Freeman, being hints on the importance and practability of adopting a more systematic method, in describing and arranging species of plants. In his preliminary observations the writer complained that descriptions were generally without systematic arrangements, except where the species belonging to a genus are so very numerous as to be divided into groups; and that no proper account is taken of the relative value of characters, which are left to the judgment and experience of the describer. After describing the characters of the several species of *Thalictrum* and *Anemone*, which he selected as examples, he proposed their arrangements in a tabular form, as less liable to objections and more easy of reference. A continuation of a description by Mr. J. E. Dennes, of the plants in the neighbourhood of Deal, Walmer, Sandwich, and Dover, was also read. In one day Mr. Dennes recognized 84 genera, and 120 species; but has no doubt that on a fine day in July, this number would be materially increased. There were, on the table, some specimens of *Lycopodium circinatum*, of Humboldt, from South America, placed in water, in order to shew the development of the leaves.

ATHENÆUM.

BLUE AND WHITE FLOWERED PYRAMIDAL CAMPANULAS.—This plant when grown to a degree of vigour it is capable of, by a rich soil, and plenty of pot room, with one or more shiftings into larger as required, I find to grow nine feet high, with numerous subordinate spikes, and during some months at the end of summer to make one of the most showy plants in cultivation. The season to take in plants for potting being the present, and as they may be purchased at five shillings per dozen, induces me to send this small notice of the plant, that the readers of the *Cabinet* may be enabled to provide, and cultivate this truly sweet and splendid flowering plant. When grown in pots, it forms one of the most ornamental plants for a greenhouse-room, or to be placed in a vase on the lawn, or in a flower-garden. Or if grown in the open border in a deep and rich soil, it merits a place in all. I have found that by placing one of the blue flowered kinds in a shady place in the greenhouse or room, the flowers become paler and are of a most beautiful French lilac colour, most strikingly handsome.

London, Feb. 10th, 1837.

AN AMATEUR OF THE METROPOLIS.

ON *NERIUM SPLENDENS*, &c.—During the past summer, I flowered a few dwarf plants of *Nerium Splendens*, by the following method:—In April I looked over my old plants, and discovered those shoots which had a leading bud of blossom; I then took a small garden-pot, knocked the bottom out, and carefully drew the shoot through, at about six inches below its crown; I notched the stem like a Carnation, putting a bit of soil to keep the tongue open. I then tied a piece of sheet-lead under the pot, to enable me to fill it with fine rich soil. I pressed the soil tight, and placed the plant in a hothouse for a month; the layers rooted speedily. I then cut it off the parent, repotted into a larger pot, kept in the hot a fortnight longer, which was then the first week in June, and a most beautiful bloom succeeded upon all the plants, and they not more than a foot high. A free supply of water was given, whilst striking root, as well as subsequently. I beg to assure the readers of the *Cabinet*, that the plan is worth trying. I should be glad for this to be inserted in the March Number. (Too late for the first sheet of the work.—CONDUCTOR.)

Honiton, Feb. 13th, 1836.

J. P. CLARK.

N.B. The same treatment with *Nerium Oleander* would doubtless be equally successful.

ALLSPICE OR PIMENTA,—is the dried berry of a West Indian species of myrtle (*Myrtus pimenta*), which grows to the height of twenty feet and upwards, and has somewhat oval leaves about four inches long, of a deep shining green colour, and numerous branches of white flowers, each with four small petals. In the whole vegetable kingdom there is scarcely any tree more beautiful or more fragrant than a young *Pimenta* tree about the month of July, branched on all sides, richly clad with deep green leaves, which are relieved with an exuberance of white and richly aromatic flowers; it attracts the notice of all who approach it. *Pimenta* trees grow spontaneously, and in great abundance, in many parts of Jamaica; but they cannot be propagated, without great difficulty. The usual mode of making a *Pimenta* walk, or plantation, is to appropriate for this purpose a piece of woody ground in the neighbourhood of an already existing walk, or in a part of the country where the scattered trees are found in a native state. The other trees are cut down, and, in a year or two, young *Pimenta* plants are found to spring up in all parts, supposed to have been produced from berries dropped there by birds, which eagerly devours them. About the month of September, and not long after the blossoms have fallen, the berries are in a fit state to be gathered. At this time, though not quite ripe, they are full grown, and about the size of pepper-corns. They are gathered by the hand; and one labourer on a tree will strip them off so quickly, as to employ three below to gather them up; and an industrious picker will fill a bag of seventy pounds weight in a day. The berries are then spread on a terrace, in the sun, to be dried; but this is an operation which requires great care, from the necessity of keeping them entirely free from moisture. By the drying they lose their green colour, and become of a reddish brown; the process is known to be completed by their change of colour, and by the rotting of the seeds within the berries. They are then packed into bags or hogsheads for the market. When the berries are quite ripe, they are of a dark purple colour, and filled with a sweet pulp. *Pimenta* is thought to resemble nutmegs and cloves, whence it has obtained the name of all-spice. It is also employed in medicine, as an agreeable aromatic, and forms the basis of distilled water, a spirit, and essential oil. The leaves of the *Pimenta* trees yield, in distillation, an odoriferous oil, which is not unfrequently used in medicine preparations instead of the oil of cloves.

LONDON HORTICULTURAL SOCIETY MEETINGS, FEB. 7TH.—Dr. Henderson V. P. in the chair. Several books were announced. Lord O'Neill, Sir P. G. Egerton, Mr. Richard Forest, G. Coode, Esq., and Christopher Rawson, Esq., were elected Fellows of the Society. Dr. Lindley read a letter from Mr. Buchan, gardener to Lord Bagot, Blithfield, Staffordshire, forwarding therewith, forty seeds of the true Cinnamon Tree, from a tree which was imported into this country. The fruit much resembles acorns hanging in clusters of two or three, and it is considered that the plant would well bear exposure to the air in winter, in most seasons, and without much protection. Specimens had been

sent to many Botanical and Horticultural Societies, in districts where it is considered that the plant would thrive better than in Staffordshire. The flowers exhibited were, of *Echeveria gibbiflora* (Crassulaceæ) Gibbons flowered, continuing in high flower and perfection. It is a greenhouse plant flowering freely at a season when very desirable. It is of easy culture, and very suitable for either the greenhouse or sitting room. Its yellow and pinkish flowers being very showy. *Helleborus odoratus*, a plant having a pleasant aromatic odour, but difficult to increase. *Eulophia lurida* (Orchideæ.) These were from the garden of the society. *Epacris pungens*; *E. impressa*; *E. campanulata alba* from Mr. Glenny; *Boronia pimata*; *Veltheimia viridiflora*; *Poinsettia pulcherrima*; and six kinds of *Camellias* from Mrs. Marryatt; *Oncidium carthaginense*, the flowers of which were in high perfection, of an olive colour, although the plant had been kept in a drawing room in London for the last month. *Brassia maculata*, bearing yellow and red flowers. *Bilbergia iridifolia*, bearing crimson flowers; and *Thalia grandiflora* (cannææ.)

ATHENÆUM.

REFERENCE TO PLATE.

Bignonia Venusta.—This very splendid flowering hothouse climber well deserves a place in every stove; scarcely any flower can equal its beauty and comeliness when in bloom. It is of easy cultivation. If planted in the corner of a bark pit, and its roots allowed to extend in the bark, it grows vigorously, extending thirty feet or more in a season. If the plant was allowed plenty of root room by being planted into an open border in the stove, it would doubtless succeed equally as well, provided some due proportion of warmth was communicated to the soil by being near a flue, &c.; or grown in a large tub would probably answer well. Our plant is grown in the bark pit. A plant growing, in the stove of the Misses Trevor, Tingworth, near Woburn, in three years covered a surface of 500 feet, and blooms most profusely. Manure water is given at Tingworth to promote its vigour. The truss we have given has only about one half the usual quantity of flowers in it—our space not admitting more. It blooms from November till February, during which time it has a most enchanting appearance. Plants may easily be obtained at a low cost. Cuttings readily strike root, inserting young shoots of about six inches long, into a sandy loamy soil, and placing them in a moist temperature.

Catceolaries.—These very splendid shrubby kinds, have recently been raised, by the persons whose name is attached to each. In order to give our subscribers as much as possible, in each plate, consistent with a proper representation of the flower, we have only given a single blossom of each, aware that our readers would readily judge what additional show would be given by any increased quantity produced upon a plant, and thus give eight kinds instead of one or two, if large specimens were figured.

No. 1, 2, and 5, are seedlings raised by Mr. Barratt, St. John's Botanic Gardens, Wakefield. We saw them in splendid bloom last season, in his fine collection.

No. 3. This most striking dark flowered variety with its white cap, we received a specimen from Mr. Atkins, Nurseryman, Northampton—along with a number more of very superior kinds which had been raised in the establishment of Mr. Atkins; we had only space at present for this very handsome kind. Others we purpose giving during the season.

No. 4, 7, and 8. These most strikingly handsome kinds were raised by Mr. Plant, Florist, Cheadle, Staffordshire. We visited the place during blooming season, and took drawings of forty, or more, of the most superb kinds, which Mr. Plant had been so very successful in raising. To have obtained the beautiful spotting upon shrubby kinds, was a new feature in the genus, for which Mr. Plant deserves the thanks of every admirer of this handsome family flowers.

No. 6 is *C. Majoriana. superba*. A most superior kind, raised by Mr. Major, landscape gardener, Knostrop, near Leeds. The present variety is of a brighter and lighter scarlet than *C. Majoriana*. We saw plants of it in exquisite bloom.

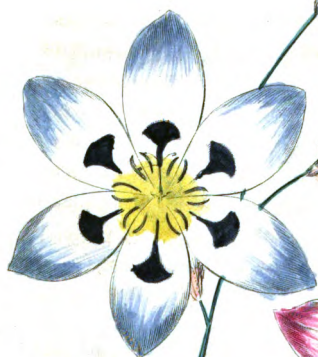
We have a plate in preparation of a number of other splendid kinds raised by each of the above gentleman. We hope each of the parties will meet with that encouragement they so deservedly merit, for their trouble, by an extensive sale of plants.



Sparaxis
var. venustum.



Sparaxis
var. decora.



Sparaxis
var. formosa.



Sparaxis
var. Dabreana.

THE
FLORICULTURAL CABINET,

APRIL 1st, 1837.

PART I,
ORIGINAL COMMUNICATIONS.

ARTICLE I.

OBSERVATIONS ON AN APPARATUS FOR HEATING A PIT.

BY C. C. B.

HAVING sent you some months ago an account of a little apparatus which I had employed for heating a pit, I now send you the result of my experiments, which I can venture to recommend for general adoption. To those who may not in the mean time have contrived any thing better for themselves I am the more anxious to do so, because I find that my previous suggestion has been acted upon in several quarters, and I fear that some disappointment may have arisen to those who adopted it as an effective instrument which was little more than an essay towards one. For those who may have been so disappointed, I just mention that by using from eighteen to twenty-four feet of three-inch pipe, instead of nine feet, and substituting a small cistern holding two or three gallons instead of the funnel, the apparatus may be effective; and by this last expedient of a cistern, my original apparatus was worked efficiently for more than seven months. The boiler, however, which I am about to describe, possesses so many advantages, over the former, that I should not recommend any one putting up a new apparatus to follow the former model.

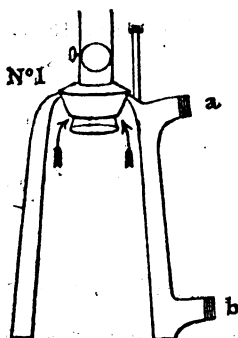
The annexed sketches will explain both the form of the boiler, and the mode of applying it.

No. 1. represents the boiler, a double cone of copper or tin, nearly resembling a loaf of sugar with the top cut off. The boiler containing a shell of water about one inch, or one inch and a half thick surrounds

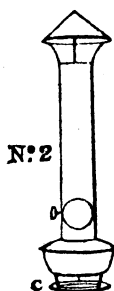
VOL. V.

H

the fire, the fuel for which is introduced as before: At the top *a* and *b* are two pipes with union joints, giving opening to the boiler at top and bottom.

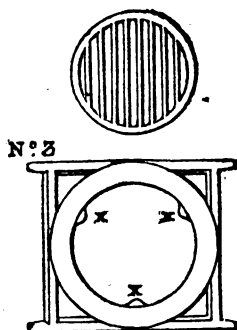


No. 2. is the chimney detached from the furnace, its only peculiarities, being a circle of iron, *c*, nearly as large as the top of the furnace, suspended over the fire, causing the flame to play against the boiler, the draft taking place all round it, and a rim of iron in form like an inverted cone attached at its upper edge to the lid, but leaving a space of about one inch and a half between itself and the circular damper, through which space the draught plays, as shewn by the arrows in No. 1. These two are essential to the working of the furnace with nough of fuel.

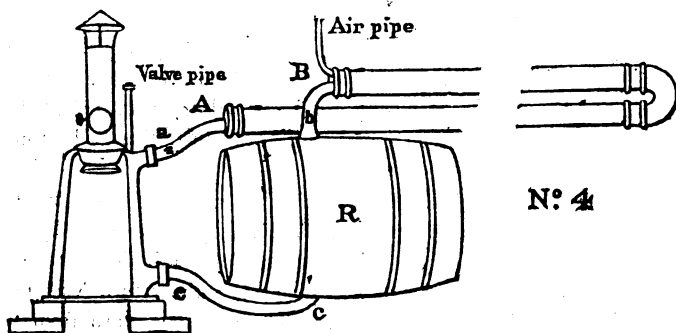


No. 3. is a ring of iron as broad as the boiler on which it rests, and which is attached to a square iron frame, by which it is fixed in the brick-work which supports it. The grate *G*. may either rest on the

three brackets, xxx, and be thrown down by a little rod with a hook, or be fixed on two pivots, and secured by a catch, so as to turn over and allow the clinkers to fall out when required.



No. 4. Exhibits the apparatus complete; the lead pipe *a* from the top of the boiler enters the lower side of the cast iron pipe A, while from B. the other extremity of the range of iron pipes, the lead pipe *b*, enters the top of this reservoir R. a strong cask answers the purpose perhaps as well as any thing. From the lower side of this reservoir, a lead pipe *c*, communicates with the union joint at the bottom of the boiler. A supply cistern placed so that its bottom is higher than the highest part of the iron pipe, and communicating with the bottom of the reservoir, and a valve not lower than the top of the supply cistern, with an air pipe on the highest point of the iron pipes, complete the apparatus.



The fire being lighted in the furnace, the heated water flows into the iron pipe and thence into the reservoir, till all be heated. When

the fire goes out, a counter current takes place, till the water in the reservoir is all cold again.

The following particulars may prove useful to those who wish to employ such apparatus.

PROPORTIONS IN INCHES FOR BOILERS OF DIFFERENT SIZES.

FURNACE. Upper. Diameter of	Lower diameter.	Height perpendicular.	Boiler thickness.	Diameter of union joints or communication pipes.	Will produce about	Size of chimney. Diameter.
(1) 6. inch.	9.	18	$1\frac{1}{4}$ inch	$1\frac{1}{4}$		3 inches.
(2) 6.	10.	20	$1\frac{1}{4}$	$1\frac{1}{2}$		$3\frac{1}{2}$
(3) 6.	12.	22	$1\frac{1}{2}$	$1\frac{1}{2}$		$43\frac{1}{4}$
(4) 6.	14.	24	$1\frac{1}{2}$	2		4

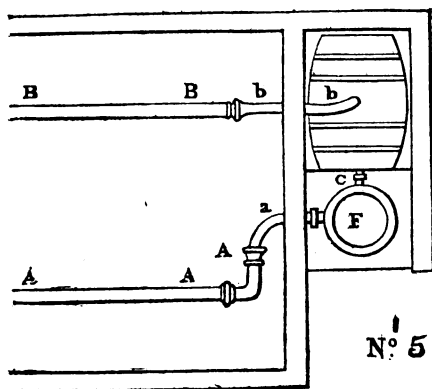
The first of these, will be sufficient for a pit containing from an hundred to an hundred and fifty square feet of glass, the last probably sufficient for a greenhouse of from six hundred to eight hundred or more. The reservoir should contain *not less* than three times as much as the pipes.

The expence of the smallest boiler is about six pounds; in tin, conical not curvilinear, about one pound fifteen shillings. The larger boiler in copper, may be each about one pound to one pound five shillings dearer than the other.

The expence of setting, from the small size of the boiler is very trifling. The best plan is a slight case, either of wood, slate, or brick work, packed with saw dust, and covered from the wet. The reservoir also should be similarly packed in saw dust, that no heat may be wasted.

Fig. 5. The annexed sketch exhibits the mode of arranging the apparatus as applied to a pit. F. is the furnace surrounded by the boiler a, the lead delivery pipe from the top of the boiler to the cast iron pipe A; B B the other cast iron pipe; b b the return lead pipe communicating with the top of the reservoir; c the return from the bottom of the reservoir to the boiler. The boiler and reservoir are outside the pit, enclosed in a small chamber of four and a half inch brickwork. The lowest point of A' A viz. A' must be higher than the

top of the boiler, and the pipe must incline upwards the whole way from A' to B' about one-third of an inch in nine feet, so that B' is the highest point of the iron pipe, here the air pipe is placed. From B to the top of the reservoir must be an uniform fall; one-sixteenth or one-twentieth of an inch in every foot is sufficient.



The principal advantages of the apparatus are, that it is applicable on a much smaller scale than any other boiler now in use. That it occupies less room, is less expensive; for though its cost in copper, equals or exceeds a common cast iron boiler, yet when the furnace doors and bars, and the expensive setting, and chimney necessary for the latter are taken into account, the economy of this will be apparent. It consumes much less fuel, and requires much less attendance, as it may safely be left for three or four hours; if once filled with fuel.

In conclusion, it is perhaps well to observe that any material deviations from the proportions given above, will probably be found disadvantageous. All cylindrical boilers, with vertical furnaces, which I have hitherto seen, have been so much too large in proportion to their height, that half the heat of the fire went up the chimney; it will be seen this defect is cautiously, and I believe effectually guarded against. A further caution also against a common error may not be misplaced, the lowest point of the iron pipe, must be above the boiler and they must incline *upwards from the point* at which they *receive* the hot water *to the point* at which they deliver it to the *reservoir*. The only case in which I should be tempted to deviate from this, would be, where the pipes exceeded one hundred feet in length, when the air-pipe may be placed at the end of it furthest from the boiler; and both iron pipes incline equally from that point towards the boiler and reservoir. The

sizes of boilers, as given above, will be found somewhat more than equal to the work assigned to them, and by using coke entirely instead of cinders, or a mixture of them in different proportions, increased power may be obtained.

With respect to pipes, I have not sufficient experience to offer much, but for those who have no better information, the following may be useful.

It will be found that in a pit from seven to eight feet broad :

2. 2-inch pipes, are sufficient to produce greenhouse temperature.
2. 3-inch, for common stove plants.
2. 4-inch, for Orchidece, and plants requiring the extremest heat that can be produced.

The results also of the following experiments may be useful as some sort of guide.

1. A boiler rather less than No. 1. filled with coal and cinders, varied 30 gallons, 55 degrees in 1 hour and 20 minutes, and boiled that quantity in about four hours.

2. Boiler No 2, raised 40 gallons, 50 degrees per hour, and boiled that quantity in three hours and twenty minutes, the temperature being at 54°.

C. C. B.

ARTICLE II.

ON THE CULTURE OF THE PINK.

BY MR. THOMAS IBBETT, MOUNT PLEASANT, BULL FIELDS, WOOLWICH.

Having in a former number of the Cabinet mentioned that there was great room for improvement in the cultivation of pinks, I therefore beg to send you my mode of cultivating that beautiful flower, which you would have received before, but circumstances of a domestic nature prevented my attending to it sooner ; in perusing your number for January 1837, I find the culture of pinks has been laid down by some one calling himself a *practical* gardener, and so he may be, and I have known very good practical gardeners possess very little knowledge of growing flowers, and I regret that the observations which have been made, are of little or no use to those, who wish to study the cultivation of pinks. As it seems to me a query if the Practical Gardener has ever seen a good bed of pinks, or he would not have written as he has done on the subject.

Having been a cultivator of pinks nearly thirty years, induces me to send you the method I adopt, for the propagation of that flower, which is by *pipings*, being the most safe and *expeditious* plan that I know of. About the third or fourth week in June, I begin piping, choosing a southern aspect in the most airy part of my garden, and I always choose my mould of an open texture, worked finely with the spade for the first four inches, and for the next two inches I sift some mould-through a fine sieve, with one-fifth of drift or river sand laid on the top of the above, I then take a straight edged board, and level it all over; the length and breadth of the bed, to be regulated according to the quantity to be piped; since I have been a dahlia-grower, I have struck my pipings where I have struck my dahlias; having removed the frame I take off the top surface until I come to the dung, I then take a fork and shake as much of the dung as will cause a gentle heat, I afterwards lay a piece of old matting on the top, to prevent the worms from working up, covering it over with the mould as above described, the next object being to select the most rare and new sorts, which I pipe first, covering them with glasses varying in size from four to twenty-two inches square, using the small ones for the best sorts, I generally take the grass or side shoot from the plants with the number stuck to them, keeping each sort separate, I then proceed to cut off the pipings, stripping the leaves to the second joint, and with a sharp knife cut them close under the joint, taking care not to injure it. In those sorts; in which the joints are shorter, I cut the third or fourth joint, I then shorten the tops as close as possible to the heart without injuring it, and as I cut them I place them in small pans of water to stiffen, which causes them to enter the ground more freely, taking care to keep each sort separate, I then take the glasses and make a print in the mould with them, I next proceed to take each piping singly and stick them into the mould up to the first joint, three quarters of an inch apart, after having filled the space I proceeded to give them a gentle watering, taking care not to put the glass down close until they are dried, or it will cause them to damp off: I proceeded in this manner until I have gone through the whole of my collection, being particularly careful to shade them from the mid-day sun, which I do by placing hoops a-cross the piping place, covering them with matting from eight in the morning till five in the evening, giving them the full benefit of the morning sun till eight o'clock: in the course of three weeks many of the glasses may be taken off, and at the end of six weeks most of them will be fit for planting out into the bed which should be prepared ready to receive them, planting them three inches apart in the rows, and each row four

inches apart. In the middle of September I generally begin to make up my bed for blooming, having it four feet wide with border boards above the level, I take out one spit of earth from end to end, replacing it with a layer of horse or cow-dung quite rotten four or five inches thick all over the bed, I then cover it with about six inches of earth, keeping it three inches higher in the centre, gradually sloping to the edge, after which I mark out the bed and plant the pinks seven inches apart: about the latter end of March I top dress them with some old rotten horse-dung worked into the mould with a small fork between each plant: in the beginning of May they will spindle up for bloom, I then take off all the side shoots that show for bloom, not having more than two of the main stems to bloom, and in many cases not more than one, and also all the side shoots that show for bloom, leaving only the main pod to bloom: about the latter end of the month many of the pods will begin to open, care must then be taken to keep the pods from bursting, to prevent which, they should be tied with a piece of soft bass matting round the middle of the pod in a tight knot, and should they be inclined to run down on one side, they should be eased on the opposite side down to the bass, which will give freedom to the petals to expand equally, and when they begin to drop their guard leaves, cards should be placed on them, laying the guard leaves even and round to allow the others to fall in regular succession, then the shade should be placed over them from the sun.

I now beg to make some remarks from what has fallen from the pen of the Practical Gardener, relative to the raising of pinks from seed which he states is the first principle of all vegetables, so far I admit he is correct, I wish I could say so in other respects. He observes you should *always* have a good stock of pink seed—but I should like to know how it is to be obtained; there has been many seasons that I have not been able to get as much seed from one thousand five hundred plants, as would raise one dozen, it is true some seasons are more favourable than others, and a greater quantity of seed may be obtained, and there are many sorts that I have not been able to save a single pod in the period of twenty years.

The Practical Gardener also recommends *the laying of pinks*, I would ask what person of any experience, or practice in piping, would attempt so tedious a method as laying, as piping of any description is better than layers, and it is my decided opinion that if carnations and picotees would strike as free as pinks, very few florists would lay either.

The time I would recommend for the sowing of pink seed, is the latter end of March, or the beginning of April, which I perform in the

following manner; I take a flower-pot No. 12, and fill it with finely sifted mould, drawing a flat piece of board over the top to make the surface even, I then lay on the seed and cover it over with very fine mould, and give them a gentle watering, covering the pot with a glass, and about the beginning of June they will be fit for planting in the natural ground and will bloom the following year.

It is a great error among the cultivators of this flower, in not getting the sorts they require in due time; I have frequently received orders as late as the middle of November after all the best plants are disposed of, the plants so late obtained cannot be expected to be so fine as those planted out in September, which gets better hold of the ground and are better able to stand the winter.

Since writing the above I have seen the second part of the Practical Gardener's remarks, and I beg to state, I have the same opinion of the second part as I had of the first, at the same time I beg to thank him for his information concerning *rats*, he states there is no animal so dangerous to pinks as *rats*, therefore you should be very watchful that they do them no mischief, I can assure him, I have a great many *rats* in my garden and its neighbourhood, and they must be all very kind ones, as I have never known them to destroy any of my pinks, *but* there is a little animal, or insect called a *grub*, which has done more mischief in *one night* than all the *rats* have done in *twenty years*, and when I find any of my pinks bit off, I work round the stem of the plant with my finger in the earth, and I generally find them about one inch under the surface, and not being quite so nimble as the *rats*, I can more easily catch them, and I show them no more quarter than I would the vermin before alluded to. In giving my opinion of the pink I beg to observe I consider it a most beautiful flower, and worthy a place in the garden of every florist, I have frequently been highly gratified during the twenty years that I have been a grower of that delightful flower, to observe after a long winter, my pinks looking beautiful when there was scarce any thing else green in the garden.

The pink is the poor man's flower, and has been exhibited for show more than any other flower until the introduction of the dahlia, which the poor man has little chance with, it requiring considerable room to grow any quantity: I consider the pink also very little inferior to the carnation or piccotee: take and place the following twelve blooms in a stand viz. Dryden's Earl of Uxbridge—Hopkins's one in the Ring—Ownsworth's Omega, Bexly beauty—Westlake's Hero—Bray's Invincible—Mans, Dr. Summers—Stevens's George Cook—Clark's Matilda—Barret's Conqueror—Seal's Miss, Austin, and Ibbet's Triumphant; and

I think it would be a difficult matter to beat them, with the assistance of the Practical Gardener to boot.

Mr. Editor I have placed the above remarks in your hands for insertion in your Cabinet, if you think them worthy a place in that publication, and rest assured should opportunity occur, I should feel proud in forwarding any communication that would assist the amateur or others in the culture of flowers generally.

ARTICLE III.

ON THE CULTURE OF THE CHRYSANTHEMUM INDICUM.

BY S. R. P. GREENWICH.

I AM so much a debtor to your Floricultural Cabinet for the pleasure and instruction I have derived from its pages that I am anxious to offer any contribution under the hope that I may assist in affording to others a reciprocal pleasure.

There are few late flowering plants, that surpass in beauty the *Chrysanthemum Indicum*, its varied, and increasing colours, are daily adding fresh splendour to the floral world, and whether it be in the conservatory, the sitting room, or the flower garden, I know not a more desirable autumnal plant. Much has appeared already on the cultivation of this pretty flower; but as I last year produced a method of treating it as a dwarf pot plant, that notwithstanding the disadvantages of the late ungenial season, more than answered my anticipations, I am induced to submit my mode of culture.

Early in the spring I took from the old plants rooted young shoots planted then singly, in number sixty, and promoted their growth and strength as rapidly as possible, by placing them in a cold frame, and supplying them occasionally with liquid manure. When the pots were full of roots they were shifted into 48^o, and placed in an open situation, and watered as before; by the latter end of June the tall growing sorts, had nearly reached three feet high, and the more dwarf in proportion; they were then turned out of the pots, and suffered to get a little flaccid, the mould was partly shook from them, and their roots slightly reduced. They were next potted in 32^o as follows, some pieces of broken pots, as usual, and about two inches of compost being put into the pot, the plants, with the aid of a second person to fill up the mould, was coiled round the inside of the pot; the top of

the stem, which was left about five inches above the surface of the earth, was, by a more sudden turn, brought to the centre of the pot and there fastened upright to a stick. Should the stem crack in this operation, it will not effect the plant, if it be not severed.

The plants were placed in a shady situation; when the tops have shot a little, they were pinched off to about four inches: as soon as the laterals had started, the pots were exposed to the full sun; at the latter end of August, they were shifted into 24", the pots placed a foot apart and constantly kept moist with water or liquid manure. Thus treated they averaged from fourteen to twenty inches, and clothed with a fine healthy foliage down to the pots. They were placed in the greenhouse and sitting rooms, and produced the finest bloom I ever saw.

This may appear a lengthy process; but when it is considered, that we take more trouble to produce a fine balsam or cockscomb; surely, it will not be thought too much pains to bestow upon this delightful flower that cheers the last ray of departing autumn "when all fair things are passing away."

ARTICLE IV.

ON THE CULTURE OF IPOMOPSIS ELEGANS.

BY J. M., ESQ. HANTS,

IF Medicus does not obtain better advice relative to preserving the *Ipomopsis Elegans* than what follows, even this may prove acceptable. I pot the plants in light soil, with about an inch of small drainage at the bottom, over which I place a tuft of moss; when obliged to shift them, I am very careful not to disturb or injure any of the young roots, and sometimes (when plants were scarce) I have broken the pot, as the safer way. In planting I always elevate the plant (as it were on a little hill) in the middle of the pot, such as heaths are served; and I take care in giving water, which requires to be done moderately, but often, not on any account to let it touch the stem of the plant. Let Medicus do this, and keep them in a light and airy situation in the greenhouse, or turn them out if he wishes them to grow more luxuriantly, into the border in the spring, (the border being composed of light and open mould) and though I do not say he will not lose one or more plants without being able to account for their dying, yet I think I may confidently assert that the majority of his patients will do credit to his cause provided he attends them after the manner I have prescribed.

ARTICLE V.—A LIST AND DESCRIPTION OF PLANTS WHOSE
FLOWERS INDICATE THE HOUR OF THE DAY.

BY MR. JAMES BROWNE, DERSINGHAM, NORFOLK.

I TAKE the liberty of sending the following extract for the use of your readers if you think it worthy a place in the cabinet.

“ Among curious collections, it may be desirable to assemble the dial plants, or such as indicate the hour of the day by closing or opening; a list has already been given by Linnæus in the *Philosophia Botanica*: but the following are plants generally known and easily procured, and are sufficient to form a botanist's dial in Britain.

NAME OF PLANTS	Opens in the morning.		Shuts from Noon to night	
	Hour.	Min.	Hour	Min.
<i>Tragopogon pratensis</i>	3	5	9	10
<i>Leontodon serotinus</i>	4	0	12	1
<i>Helmenthia echioides</i>	4	5	12	0
<i>Borkhausia alpina</i>	4	5	12	0
<i>Cichorium Intybus</i>	4	5	8	9
<i>Papaver nudicaule</i>	5	0	7	0
<i>Hemerocallis fulva</i>	5	0	7	8
<i>Sonchus lœvis</i>	5	0	11	12
<i>Agathyrus alpinus</i>	5	0	12	0
<i>Convolvulus arvensis</i>	5	6	4	5
<i>Lapsana communis</i>	5	6	10	0
<i>Leontodon taraxacum</i>	5	6	8	9
<i>Achyrophorus maculatus</i> ...	6	7	4	5
<i>Nymphæa alba</i>	7	0	5	0
<i>Lactuca sativa</i>	7	0	10	0
<i>Tagetes erecta</i>	7	0	3	4
<i>Anagalis arvensis</i>	7	8	2	3
<i>Hieracium pilosella</i>	8	0	2	0
<i>Dianthus prolifer</i>	8	0	1	0
<i>Calendula arvensis</i>	9	0	3	0
<i>Arenarea purpurea</i>	9	10	2	3
<i>Portulaca oleracea</i>	9	10	12	12
<i>Malva Carolinians</i>	9	10	19	1
<i>Stellaria media</i>	9	10		10

The above might be planted in a department by themselves, and would form an object of great interest to all lovers of Nature,

While I have pen in hand, I must express my disapprobation of botanists continually changing the names of plants, names that have been transmitted to us by our forefathers. Our old favorites have now

new names, and many of them nothing near so appropriate as the old. It appears to me that the meddling parties, either do it, to render new articles necessary, or to (ridiculously) immortalize themselves by a display of their supposed ability above their predecessors. I will just quote a few of them as examples, *Coreopsis tinctoria*, to *Calliopsis bicolor*. *Dahlia superflua*, to *Georgina variabilis*. *Colutea frutescens*, to *Sutherlandia frutescens*. *Celsia acutifolia*, *incisifolia*, &c. to *Alonsoa*, with many others.

I find too there has been an attempt made to divide our old favorite *Tropæolum* to two or more genera, I trust that such alterations of the names of plants (excepting with good reason) will never meet with support from the true lovers of Flora. I have two or three other articles in course of preparation which shall be forwarded as soon as my avocations will allow me time to finish them.

ARTICLE VI.—ON THE CULTURE OF ORCHIDEOUS EPIPHYTES.

BY A THREE YEARS PRACTITIONER.

In the summer of 1833, a number of plants in bloom of this singular and interesting tribe, came under my notice in the collection of Messrs. Loddiges of Hackney Nursery, which at once determined me on commencing their culture, having a great deal of glass. I purchased one hundred pounds worth of plants to begin with, and had them placed upon a back flue in a vinery, at eight feet from the glass. The period of the vines being in leaf, the plants had the advantage of a partial shade; in this situation they did well in the summer of 1834, but when the winter approached I found them declining in vigour and looking unhealthy, with all the attention I could give them, following the direction of Messrs Loddiges, and Mr. Cooper of Wentworth. I immediately had a house erected to grow them in, I have it heated on the hot water system, three feet above the pipes going round the house, I have a ribbed trellis three feet broad, upon which I have a quantity of plants, they flourish amazingly. At the centre of the house, I had a pit constructed with a wall three feet high, the breadth of the pit is eight feet, and length thirty six, two hot water pipes are laid up the centre, and a floor one foot above, where the top pipe is laid it is of tiles. On this floor I laid one foot of moss, and upon the moss I placed my plants, growing in pots, wicker baskets, &c., they flourish amazingly too. Since I commenced growing this tribe of plants, I have had considerable opportunities of trying experiments on their culture, as well as ascer-

taining the practice of most of the celebrated cultivators. I now possess eight hundred and forty six specimens. Most of them I have purchased, and in consequence I have carefully examined the soil in which I have received the plants. The following system of management is what I practise in general with all the kinds, and none can boast of more healthy, or finer specimens for the period I have had them.

In the specimens I have had from Messrs. Rollinson's of the Tooting Nursery, I found a small garden pot inversely placed inside the pot in which the plant was growing, of course it was a much smaller pot than the pot which held the plant, around this small pot was placed two inches deep of small broken potsherds. This forms a very efficient draining, which is of great importance to a successful culture of the plants; the plants are grown in two parts of broken potsherd, with one of peat. I have followed the same system of management as to potting, excepting substituting one portion of sphagnum moss for one of the broken potsherds. I find the plant thrive better in this, than in that which Messrs. Rollinson's plants were retained in. I observed that Messrs. Rollinson's mode of potting had been as follows. A small inverted pot, around which were a good portion of largish potsherds, upon those a few smaller, then a layer of peat in peices near an inch square, on the top of this a layer of small potsherds, and so proceeding till the pot was filled, finishing with the potsherds at the surface. Messrs. Rollinson's plants look very healthy and grow vigorously.

In heating by hot water there is the advantage of a moist atmosphere; I have two open tanks from which is considerable evaporation. In addition, I water the mossy surface between the plants twice a day, and sprinkle them over the tops twice a day, during the season the plants are in a growing condition, that is from February to November. I do this with water that is warm, I do not give as much in these sprinklings as to wet the soil, but only to moisten the foliage. I keep the temperature for the above named period, at seventy degrees by night, and from seventy to eighty by day. At the season of rest, I keep the temperature at sixty two by night, sixty eight by day. I have a quantity of plants in baskets made of sticks, nailed together at the corners, allowing spaces between the sticks, the roots protude through them. The plants flourish well by this mode of treatment.

I have grown for two seasons, several plants of *Dendrobiums*, *Oncidiums*, and *Epidendrums*, secured to pieces of sycamore wood branches, about five or six inches in diameter, I placed a quantity of sphagnum moss against the wood, then the roots of the plant, and over them more of the sphagnum, the whole secured by metallic wire. Some of them I have

suspended in the house, others I placed in the pit where the wood becomes warm, the latter have hitherto done best; a few of those growing best, I placed upon an end in a deep pot, and then filled around the wood with pots, peat and sphagnum, since which, they have grown very vigorously. In hot sunny days I have a close meshed net thrown over the glass roof. My house is double-roofed, admitting a great deal of light, which renders the covering very necessary in hot weather.

ARTICLE VII.

ON THE CULTURE OF MESEMBRY ANTHEMUMS, IN THE OPEN AIR.

BY MR. JAMES HALL, GARDENER, HARTLEPOOL LODGE, THIRSK, YORKSHIRE.

This very showy following tribe of plants is not cultivated in general as I am sure its merits demand. I therefore send these few remarks more with a view to bring the plants into notice, by growing them in the open air, than describing any new mode of culture as to soil, &c.; during the last season I had a most brilliant show from early in May to October.

Having a considerable number of plants which I had cultivated in the greenhouse, and cool frame for two or three years; on May 1st, I planted them out in the open air, turning them out of the pots with balls entire. I selected a situation under a south wall, where there was a flower border four feet wide. I planted four rows of twenty-five plants in a row, at one foot six inches apart in the rows, placing them alternately. The taller growing kinds in the back row, gradually declining to the post one which consisted of the very dwarf growing kinds. The border was made about a foot deep and filled with the following kind of compost, fresh loamy soil, well rotted cow-dung, and a good addition of lime rubbish and river sand. This compost was well incorporated and mixed up for two months, before I put it in the border. When I planted out the plants I gave them a good watering to settle the soil to the balls, and carefully attended to this through the season. They required a plentiful supply when they had began to root anew in the border, the dwarf kinds I find require less than the vigorous sorts, the sub-soil of the border is rock, and being dry, I think it more suited to the growth of the plants. I beg to assure the readers of the Cabinet, who have cultivated this tribe of plants that it is well deserving their attention. The flowers only expand when the sun is upon them, so that it is re-

quisite to have them grown in a situation possessing such advantage. On November first, I took up the plants, and re-potted them, keeping their heads entire, and placed them in the greenhouse and cool frame for winter protection. During the winter I give the plants a scanty supply of water, never allowing them to be saturated at the roots, but when quite dry to give them as much as will moisten all the soil in the pot.

I have a rock-work twenty eight yards long, with a ten feet depth of frontage, having a full south aspect, well protected on the north by a thick holly hedge, upon this rockery, I planted sixty good strong plants. The taller kinds I placed in hollows, out of which the heads rose some distance: the dwarf and trailing kinds to spread and hang over the surface of the stones. I used a compost for them to grow in same as for the border. In this situation they flowered most profusely, producing a very pretty effect: they required a good supply of water, almost every day, but they amply repaid for all attention. I judged that in consequence of the plants on the rockery being dry at the roots, and screened on the north, that I might safely allow them to stand out through the winter which they would survive, but on examining them yesterday, (February 23rd,) I find nearly all the tops are killed. It is probable the roots of some may be alive, but if they push shoots, they will be so late in the season, and perhaps not more than two or three shoots to a plant, that little show would be produced, (if any) by them. For the future I propose taking up my plants from the rockery, and giving winter protection in a dry, cool, frame.

To have a good show, established plants of two or more years growth is necessary. Small plants make but little show, unless planted closely together; they are easily raised from slips or cuttings, put off from ripened shoots of the young wood. The cuttings must be inserted in a dryish soil, and be kept so till the cuttings begin to wither, when if water be moderately supplied, they will immediately strike root. A gentle heat in a cutting house or frame, assists to strike more certainly. Thus in two years a good stock of plants may be obtained to turn out which will produce effect.

PART II.

LIST OF NEW AND RARE PLANTS.

Noticed since our last.

1. *BEGONIA OCTOPETALA*, eight petaled, (Bot. Mag. 3559.) Natural order, Begoniaceæ. Linnæan class Monœcia. Order, Polyandrias. This is by far the finest flowering species that has yet been introduced into this country, the flowers are as large as those of a single Anemone; it was sent from Lima in 1835, by J. McLean, Esq. to the Botanic Garden, at Glasgow, where, in the hot-house, it bloomed in October and November, of 1836. It requires a very high temperature to bloom well. The root is tuberous, the plant does not produce a stem. The leaves are upon long foot-stalks a foot and a half long, the leaf is eight or ten inches long, cordate. The flowers are produced in corymbs, of a greenish-white colour: the male blossoms are larger than the female: each of the former are two inches, or more across. *Begonia*, in compliment to M. Begon, a French promoter of Botany.

2. *BOLBOPHYLLUM BARBIGERUM*. Bearded flowered. (Bot. Reg. 1912.) Orchidaceæ. Gynandria Monandria. A most singularly pretty flowering Orchideous Epiphyte Plant, which has bloomed in the collection of Messrs. Loddiges, at Hackney, in whose collection it bloomed during the last year; it was introduced from Sierra Leone. The flowers are produced upon a raceme of six inches in length, upon each are from sixteen to twenty flowers: the petals are very minute, scarcely perceptible; the lip is long, narrow, flexuose, closely covered with a yellow felt, within its point there is a deep purple beard of very fine hairs, and on the under side is another such beard of fine hairs; at the end of the lip there is a purple brush of threads, which by a current of air, waving about, to produce a graceful and pretty effect; the lip, with its yellow felt, purple brushes, and two beards, is jointed so delicately that a very slight breath produces a rocking movement, which makes it appear as if some animal nature was possessed by the plant: the flower is a most extraordinary production. Messrs. Loddiges have another species of similarly curious habits. The plant has something of the appearance of a small kind of *Oncidium*. *Bolbophyllum*, from *bolbos*, a bulb, and *phyllum*, a leaf; alluding to the leaves arising from a bulb-like stem.

3. *CRATÆGUS FLAVA*, Rough-barked Thorn, Roseaceæ. Icosandria Pentagynia. (Bot. Reg. 1939.) The single fruited variety was noticed last month, the present species bears its fruit in clusters of three or four berries upon each, they are of a greenish-yellow.

4. *CHYSIS AUREA*, Golden-flowered. Orchidaceæ. Gynandria Monandria. (Bot. Reg. 1937.) Another splendid flowering species of Orchideous Epiphyte, which has been introduced into this country by Mr. Lowe, of Clapton, in 1835; it was collected by Mr. Henchman, in the valley of Cumancoa, in Venezuela. Mr. H. describes it as growing suspended by long fibrous roots, from the lateral branches of trees, so that its pseudo-bulbs hanging pendulous wave in the wind, and produces a spike of ten flowers. Mr. Bateman of Knypersley, has a plant of it which has grown very rapidly suspended from a rafter in a pot, planted in turfy-peat and broken potsherds. The stems are in structure very like those of a *Cyrtopodium* or *Catasetum*, but its real affinity is to the genus *Epidendrum* and its section. The flowers are very showy, each about an inch and a half across, the sepals are white at the lower part of a golden-yellow. Labellum, white with deep red veined stripes.—Petals same colour as the

VOL. V.

I

sepals. *Chysis* from *chysis* a melting. The pollen masses being as it were fused together.

5. *DELPHINIUM MONTANUM*. Mounta in Larkspur. Ranunculaceæ. Polyandria Trigynia. (Bot. Reg. 1936.) Synonym. *D. elatum*. *D. hirsutum*. One of the handsomest flowering species, a native of the Alps of Europe. It is a hardy perennial, flowering from August to October; growing from five to seven feet high. The plant is covered with soft green down, and the flowers are of a pale sky-blue, slightly tinged with purple. This is an old inhabitant of our gardens, but, we have given these particulars in order, that our readers who may possess the kind and not know its real name, may be able to do so.—

6. *DAVIESIA ULCINA*, Furze-like. Leguminosæ. Decandria Monogynia (Pax. Mag. of Bot.) A very neat and handsome flowering greenhouse plant, a native of New Holland, it well deserves a place in every collection. The plant forms a very neat bush; the flowers are produced in vast profusion, and are very neat and pretty, much resembling, but a little larger, than those of the *Eutaxia myrtifolia*. They are produced from April to June, and they are of a bright yellow with red centre. *Daviesia* so named in compliment to Rev. Hugh Davies, F. L. S., a celebrated Botanist in Wales.

7. *EPIDENDRUM CHLOROLUCEUM*, Green and White flowered. Orchidaceæ. Gynandria Monandria. This new species has bloomed in the collection of John Allcard, Esq., in September, 1836, and by that gentleman imported from Demerara; the flowers are rather uninteresting in appearance; they are produced on a raceme of eight or ten upon each, about three quarters of an inch across; they are without scent; sepals and petals green; lip white. *Epidendrum*, from *epi*, upon; and *dendron*, a tree.

8. *EUPHORBIA FULGENS*, Fulgent flowered. Euphorbiaceæ. Dodecandria Prigynia. (Pax. Mag. Bot.) This very neat and handsome flowering plant is a native of Mexico, and has recently been introduced into this country. It has bloomed in the select collection of Lucombe, Price, &c. Exeter Nursery. It is an elegant ornamental Stove Plant; branched upright, leafy, growing freely, and blooming profusely; the leaves at the ends of the shoots are of a pinkish purple colour at the underside, and of a dark green above; the older leaves wholly of a green colour; the flowers are produced in groups of three or four together in constant succession along the shoots; each flower is near half an inch across, of a bright red colour with a small yellow tube. The brilliancy of the flowers, their vast profusion, and elegance of the plant, renders it a very desirable, and which ought to be in every collection of hot house plants. It propagates very easily, and grows rapidly. *Euphorbia*, so named in compliment to Euphorbus, a physician to Juba, King of Mauritania, and who is said to have first used the plant in medicine.

9. *GESNERIA SELLOWI*, Dr. Sellow's Gesneira, Gesneriæ. Didynamia, Angiospermia. This very elegant flowering stove plant has been introduced into this country from the Brazils, and has been specifically named after Mr. Sellow, a collector of plants, employed by the Prussian Government. It well deserves to be in every collection of hot house plants. The flowers are produced in a raceme, numerous upon each; of a fine scarlet colour. Each flower is about three inches long. *Gesneria* in honour of Conrad Gesner, a famous botanist of Zurich.

10. *LISSOCHILUS SPECIOSUS*. Mr. Griffin's Showy Lissochilus. Orchidaceæ. Gynandria Monandria. (Pax. Mag. Bot.) A native of the Cape of Good Hope, from whence it was imported by Mr. Griffin, of South Lambeth, London, in whose collection it has bloomed.—It is one of the terrestrial Orchideæ, which flowers freely from May to August; a hot house of moderate temperature appears to suit the plant best. The flowers are produced upon a scape rising two feet high, of a fine yellow colour. Each flower is upwards of two inches across. Like this tribe of orchideous plants, the present delights in a rich loamy soil, mixed with peat and sand, the pot to have a good proportion of drainage, care being taken not to have too large a pot.

11. *MORNA NITIDA*. The beautiful Morna. *Asteracæ*. *Syngensia Polygamia æqualis*. (Bot. Reg. 1941.) Sir James Stirling introduced this neat and pretty flowering plant into this country in 1835, from the Swan River, Australia; where it is found to inhabit the dry parts of the country. It has bloomed in the very select and extensive collection of R Mangles Esqr. Whitmore Lodge, Sunning Hill, Berkshire. That gentleman exhibited it at the Horticultural Societies' Show, at Cheswick in 1836, and a medal was awarded for it.

It is a neat and delicate plant, producing cymose heads of numerous flowers, each about three quarters of an inch across, of a fine yellow colour. They resemble the flowers of *Elichrysun bracteatum*, but are smaller, and very superior in delicacy and richness. It is a perennial plant, well meriting a place in every collection of herbaceous plants. Morna, so named after *Morna* one of the heroines of the northern romances.

12. *NEMOPHILA ATOMARIA*. Speckled flowered. *Hydrophyllacæ*. *Pentandria monogynia*. (Bot. Reg. 1940.) An hardy annual, probably from California. It was introduced into this country the last year. The flowers are about half an inch across, white, with a slight tinge of blue at the centre, and spotted with small lead coloured spots. When put in contrast with *N insignis*, it is an uninteresting species. *Nemophila* from *nemo* a grave; and *philo* I love, referring to its native habitation.

13. *NUTTALLIA CORDATA*, Heart-leaved. (Bot. Reg. 1938.) *Malvacæ*, *Monadelphia Polyandria*. A native of North America, where it had been collected by the late Mr. Drummond; and it appears forwarded to the Glasgow Botanic Garden. It is another pretty addition to this handsome genus. The flowers are of a pretty blush colour, each an inch and a half across. It well deserves a place in every flower border, *Nuttallia*, in compliment to Mr. Thomas Nuttall, a writer on Botany, in North America.

14. *PETUNIA VIOLACEA*: *HYBRIDA*. Purple *Petunia*, hybrid varieties. *Solanaceæ* *Pentandria Monogynia*, (Bot. Mag.) 3555. The impregnation of *P violacæ* and *P nyctaginiflora*, has produced several very charming varieties, such as, *Pale Pink* with a dark centre; *Sulphur* with dark centre; *White* with dark centre, and others streaked and veined with dark. The size of the flowers of some of these hybrids has been much increased, some being three inches across. All the tribe merit a place in every collection of greenhouse, or border plants for summer, being highly ornamental in either situation. *Petunia*, from *Petua* the Brazilian name,

15. *PHYCELLA BREVITUBA*, Short-tubed. *Amaryllidacæ*. *Hexandria Monogynia*. (Bot. Reg. 1943) A neat and pretty species, which it appears will flourish out of doors if planted in a dry and warm situation. The Honourable and Reverend Mr. Herbert has grown it successfully in this way, and in his treatise on *Amaryllidæ*, to be published this month, some instructions upon their treatment will be given, which being the result of many years observation and practical experience will be very valuable. *Phycella* from *phykos* red alkanet colour.

16. *RYTIDOPHYLLUM AURICULATUM*. *Gesneriaceæ*. *Didynamia Angiospermia*. (Bot. Mag. 3562) Recently introduced into this country to the Glasgow Botanic Garden, its native country is not known, but it is probable from the West Indies consequently (if so) will require a hot house treatment. The stem rises several feet high producing cymes of flowers of a fine yellow, spotted with red inside, and a yellowish green outside. The tube is near an inch long, and the five parted monophyllous corolla is near three quarters of an inch across. *Rytidophyllum*, from *rutis*, *idos*, wrinkle: and *phyllum* a leaf.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON IPOMOPSIS ELEGANS.—I hoped some reply would have appeared in the Cabinet this month, to the observations of Medicus in your February Number on the Ipomopsis Elegans. Like him I have raised plants that have grown well till they appeared ready for flowering, and then they have withered and died. I have tried them in the borders and in pots, in the open air and under shelter, but have not succeeded in any way, the soil of my garden is very light, and all the species of Gilia succeed remarkably well in it. I am a great admirer of the varieties Zinnia Elegans, and have cultivated them with great success, but I frequently find that when they are growing luxuriantly, without any apparent cause, the main stem withers, and they die. This occurs at all stages, from seedlings an inch high, to plants in full bloom. If you, or any of your correspondents can point out a successful method of cultivating the above plants, you will oblige
LOLOTTE.

I am uncertain how to address you, I wish you would state in your next Number of the Cabinet, which I have taken in from its commencement, and find it highly useful.

12th March, 1837.

ON CLEARING A GARDEN OF FROGS.—I shall be much obliged if you, or any of your Correspondents can inform me of the best method of clearing a garden of young frogs, which are very abundant, as there is a large pond on the premises, though it is far from being damp. Should I not succeed in destroying them, have I reason to fear they will still be injurious as well as disagreeable? When will Rosa continue her remarks on budding roses, for I have been unable to find them, since the March Number, though she promised then to continue them in the May or June Number. I hope this may not be too late for insertion in the August Number, in time to destroy the frogs when young.
KALMIA.

ON DOUBLE CLARKIA.—I see in the last month's Cabinet J. King enquires about the double Rose Clarkia. I never heard of such a flower before. I should be obliged if Mr. Kernan would give an explanation. Is not Clarkia Elegans Rosea, and Double Rose Clarkia the same?

March 15th 1837.

PELARGONIUM

ANSWERS.

BEST FIFTY SORTS OF DAHLIAS.—I herewith send you a list of what I consider the best fifty sorts of Dahlias of last year's cultivation. Not living near the metropolis, I have not had an opportunity of seeing the flowers of the new sorts of Dahlias, but I doubt not but "Pensee," in last month's Cabinet has already described the best fifty sorts that will come out this year.

Acme, Harris's
Agenoria
Alpine Shepherdess,

Aurora
Angelina
Adelia

Apollo
Ariel
Ariadne
Beauty of Telford
Blue Beard
Brigand Chief
Chamelion
Calaisflora
Conqueror, Harris's
Criterion
Dodd's Mary
Duchess of Buccleugh
Dr. Halley
Enterprize
Glory
Gutatata Perfecta
Honorable Mrs. Harris
King of the Fairies
Lady Lacelles
Lavinia
Lilac Perfection
Lord Nelson

Lovely Ann
Madona
Madame Vestris
Magnum Bonum
Micans
Miss Penfold
Mrs. General Grosvenor
Napoleon
Newich Rival
Perfection Yellow
Perfection, Holman's, Scarlet
Queen Elizabeth
Sterling Gold, Rendle's
Rose Incomparable
Rose Pink
Springfield Rival
The Gem, Brown's
The Rival
Vandyke
Venus
Village Maid
Vulcan

P. S. The prices can be seen by referring to the Dahlia Catalogue at the end.
AN ADMIRER OF DAHLIAS.

March 6th 1837.

FORTY SUPERB SORTS OF HEARTSEASE.—Seeing a request in the Cabinet for March that some Connoisseur of Heartsease would send a list of the best forty sorts, I have taken the liberty of forwarding the annexed selection of names; your correspondent wishes also for a description of the colours, &c., but that, I must beg to believe as a Pancey is far more difficult to describe than a Dahlia, or indeed any other florist flower, for although the colours and pencilling are very different to observe, I am afraid a written description would make them appear very similar.

I can however recommend all I have quoted as first-rate sorts.

R. S. MOUNTJOY.

Ealing, Middlesex, March 15th, 1836,

Thomson's King
Thomas's Anne
Thomson's Lord Glamis
Thomson's Lilac Perfection
Thomson's Enterprise
Thomson's Desdemona
Thomson's Gem
Thomson's Sir John Broughton
Thomson's Ponom
Thomson's Nonpareil
Rogers's John Bull
Rogers's Minerva
Lane's Lucifer
Lane's Countess of Bridgewater
Page's Hornsey Hero
Marshall's Reform
Brennan's Hector
Mountjoy's Hecuba
Mountjoy's Magnum Bonum
Mountjoy's Andromache
Mountjoy's Xantippe

Mountjoy's Cedo Nalli
Mountjoy's Beauty of Ealing
Mountjoy's Blucher
Mountjoy's Cupid
Mountjoy's Van Tromp
Mountjoy's Sir John Seabright
Mountjoy's Duke of Sussex
Mountjoy's Ealing Rival
Mountjoy's Black-eyed Susan
Mountjoy's Harriet
Mountjoy's Madamselle Grise
Mountjoy's Maid of Judah
Mountjoy's Forbisher
Mountjoy's Flora
Mountjoy's Sophia
Mountjoy's Jessey
Mountjoy's Matilda
Mountjoy's Cream
Mountjoy's Voluna
Mountjoy's Evelina

A few of them are not yet ready for sale.

REMARKS.

A LIST OF SUPERIOR GERANIUMS.

<i>Geranium—Amabile Splendens of African.</i>						£	s.	d.
	£	s.	d.					
Alecia	3	0	0	Mennon	- - - - -	0	7	6
Ariadne	1	1	0	Lady Denbigh	- - - - -	0	7	6
Arbaces	1	1	0	'Touchstone	- - - - -	1	1	0
Bellissima	1	1	0	Mar's	- - - - -	1	1	0
Beauty of Ware	1	1	0	Queen of trumps	- - - - -	1	1	0
Countess of Jersey	2	2	0	Lady Ashley	- - - - -	1	1	0
Don Janne	1	1	0	Maid of Artois	- - - - -	1	1	0
Diomede	0	5	0	Lydia	- - - - -	1	1	0
Francesco	1	1	0	Mussidora	- - - - -	2	2	0
Grand Sultan	1	1	0	Incarnation	- - - - -	1	1	0
Compactum Rubicum	1	1	0	Louis	- - - - -	1	1	0
Diadematum Rubescens	0	7	6	Maid of Athens	- - - - -	0	15	0
Rouge et Noir	1	1	0	Hector	- - - - -	0	5	0
Rembrant	1	1	0	Constance	- - - - -	0	5	0
Queen Bess	0	7	0	Duverrey	- - - - -	0	5	0
Miss Annesley	0	5	0	Miranda	- - - - -	0	5	0
				Hericratianum	- - - - -	0	5	0
				Pictum	- - - - -	1	1	0

Those I consider very fine flowers, and such as I can strongly recommend.
Surrey Lane Nursery, Battersea, London. N. GAINES.

ON DESTROYING ANTS.—I have at last hit on an expedient of destroying them, and that is merely anointing their runs with gas tar. We use large quantities of it here, for painting doors and fences. I have also found it useful in preserving the bark of fruit trees from hares and Rabbits. It should be put on very lightly with a paint brush.

MR. KERNAN'S LETTER.—THE DECEASE OF MR. SABINE.

DEAR SIR,

I got your letter, and mentioned to Mr. Sabine how his name was omitted as the author of the Article he had desired me to mention to you. He felt pleased at the acknowledgment of the obligations you were under to him.

But it is a painful truth to me to have to inform you of Mr. Sabine's sudden death. Never did I receive intelligence that more affected me, as he had been in my shop the week before, as he was in the habit of being once almost every week when in town. In his death I have sustained a great loss; from his kind and fatherly instruction and advice, and feeling always happy in giving me any information he thought would be of service to me, and the great interest he took in recommending me to his friends and their orders. Surely then I have reason to regret his loss, nor can his enemies say in his early encouragement of so humble and so young a man as myself he could have had any object, it was on his last visit I had talked of yourself and Mr. Marnock, and asked his advice on the following paragraph; I intend putting at the bottom of my Catalogue, as my advice on the blooming of Annuals.

"It may be questioned why I place some annuals (heretofore considered and placed in other Catalogues under the heading, Half Hardy,) in my present List—Under Hardy. I do so from practical observations, seeing those I have so removed to Hardy, when so treated, blooming to much greater perfection than when raised in a hot frame and afterwards transplanted.—One plant, raised in the open border, will generally grow to six times the size of one raised in heat and transplanted. In sowing Annuals in the open border that are rather tender, if the soil is not light and sandy, give a top dressing of pit sand and rotten manure: smooth this well with the rake—then draw very shallow drills from half an inch to one inch in depth, regulated by the size of the seeds—sow and cover in; if vermin or the season do not disturb them, you will not

require more than one plant in a hundred of those that come up; be careful to begin thinning when the plants are quite young. Do not sow delicate Annuals in the open borders until the end of April, or (which is better) make two sowings, one in the middle of April and the other in the beginning of May; these will succeed each other until October.

I would here advise my Friends to try the above plan with those marked [*], which will be found among the Half Hardy Annuals."

He told me I was quite right and that I should make it public if I did not care for being abused for a good intention, I said of those I had removed to hardy, were grown with that care and attention generally bestowed on them by ladies or clergymen, I very little feared the result. None but friends could envy his good advice to me, and his whole countenance would beam with satisfaction when he observed how I appreciated his council, and when he brought me an order he would put me to the test of my knowledge by putting up a certain quantity that would in my opinion make most show and follow best in succession, in making such selection I was almost always fortunate in meeting with his approbation.

That he had many old and inveterate enemies, I have often heard, but from what real cause I know not. But by principle I know he was a gentleman that disdained dishonour, and his zeal and devotedness to the advancement of the science of which he was an eminent member, had few, very few superiors; and whether he was considered in his private or public station as a Botanist, in my opinion, there never breathed a being less capable of exciting enmity against himself, or of offering even by implication an offence to others than Joseph Sabine, Esq. if he had a fault it was an error attributed to his noble nature, to be deceived rather than suspicious, and his remorseless enemies knowing such, made, or tried to make him their victim, but he lived to see the day that out lived them all, some of the calumnies it is thought preyed heavily upon him, though circulated too often by those who had just head enough to invent censure, but not heart sufficient to feel for its consequences.

Others there are who from the estimation he deservedly was held in, felt a sympathetic remorse, and would have been glad of his forgiveness, having seen their error; but who like a "certain medical tree yields not its healing balm, till it is once wounded," and though every abuse was heaped upon him, it should not have been forgot he was the founder, and laboured hard to establish the Horticultural Society, and encourager of every thing else where his assistance had any tendency in forwarding science; as Sir T. Ackland justly said, they ought to take into account the great good he had done, and not leave all the blame at his door. He who strike or maim a man may remedy in a great way by medicine, but there is no herb, nor compound of herbs cultivated from Culpeper, to the present time, in any of our Botanic or Horticultural gardens that would cover or heal the wound inflicted by slander—but no power could stain the "unsunned" snow of a character and intentions as pure as his was. There are many young men to my knowledge, deeply indebted to his kindness and encouragement, none certainly more grateful, but many more competent to do greater justice to his memory than your

Humble and obedient Servant,

4, Great Russel Street, Covent Garden London.

J. KERNAN.

REFERENCE TO THE PLATE.

Sparaxis's.—The four figures are a small portion of a spike of each sort. They are hybrids, raised by a gentleman in Guernsey, who deserves the thanks of every cultivator of this lovely and interesting tribe of plants. We believe the gentleman would have pleasure in exchanging with any amateur or nurseryman for other plants; the address of the gentleman we can supply. We subjoin a portion of the remarks sent us at the time the drawings came.

Guernsey, Jan. 20th 1837

"In conformity to the offer I made you some weeks since, I now avail myself of a private hand to forward you the drawings of seventeen kinds of *Ixias*, *Sparaxis*'s and other Cape bulbous plants which I offered you, I grow all the kinds and the sketches were made for my own private use only, they are very faithful representations. Almost all the kinds ripen their seeds freely here in the open air, and grow and flower so much larger, stronger, and and brighter in colour in consequence of being so cultivated, that after two or three years, it is almost impossible to recognise the small pale flower received from England. Some *Ixias* raised here from seed, attain the height of three and a half, and even four feet, with spikes of flowers in proportion, and the bulbs themselves nearly the size of *Gladioli*. The double ring of black in the throat of some of the seedlings. *Sparaxis*'s is a new and very beautiful feature in those charming and interesting flowers. We have usually found this class of plants to succeed best when grown in a mixture of decayed leaves, sandy loam and peat; having the pots, or if in the open air, the border well drained." We hope the gentleman will favour us with the mode of culture, which has been so very successful. For although the climate be very congenial, some other exciting cause has contributed to such extraordinary large productions. The great beauty of *Sparaxis*'s and *Ixias* continuing in bloom in the open border from May to July, and some even to August, render them well deserving an attempt in every warm situation. We have seen them in this part of Yorkshire flourish amazingly in a border at the front of a vinery, peach-house, and greenhouse, and close to a south aspect or fruit wall. There is but little attention required in their management, and they most amply repay for any given them.

FLORICULTURAL CALENDAR FOR APRIL.

PLANT STOVE.—Still support the requisite degree of heat by fires at night as the plants will now begin to show their blossoms, which should be encouraged as much as possible at this season. Fresh air, when the weather is favourable, is very necessary, and should always be admitted when required; this will greatly assist their flowering, and cause the new shoots to be strong and healthy. This month is the most proper time to pot such plants as may require it, taking great care to use such compost as is congenial to them. Any that do not require shifting into larger pots may have the surface soil renewed with fresh compost, which will greatly invigorate them, and also add to their neatness. The same directions respecting watering and cleanliness may be observed, as given last month. Still propagate all kinds of exotics by means of seeds, cuttings, layers, or suckers, according to the nature of the different kinds; insert them in pots, and plunge them in hot-beds, which will promote their vegetation and rooting quickly and certainly.

GREENHOUSE.—These plants will now require large admissions of air at all times when the weather is mild, for as most of them will now be shooting freely, they must not be kept too close. The plants must now be looked over, to see when water is wanted, and let all the plants be properly supplied therewith, as this is now a very necessary article, particularly when they are in the house; be careful of the succulent kinds. Let no decayed leaves or shoots be allowed to remain, but let such be taken off as soon as perceived; and all shoots that are of a weak straggling growth must be pruned more or less, as appears necessary. Let no weed, moss, or litter, be seen on the tops of the pots and tubs; and if any foulness be contracted on the plants, let it be instantly removed. In arch shrubby exotics of any particular kinds—sow seeds in pots, placing them in a hot-bed; sow seeds of orange, lemon, &c. for stocks; also propagate by cuttings, layers, or otherwise, and if placed in a bark bed in the pine stove or hot bed, they will be greatly facilitated in their rooting.

HERBACEOUS PERENNIALS—should now be divided and re-planted; also biennials, as Sweet Williams, &c., should be planted for blooming this season.



*Burrall's
View of Wakefield.*

THE FLORICULTURAL CABINET,

MAY 1ST, 1837.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON A LIST OF PERENNIAL PLANTS.

BY R. T. W. T.

THE request of "A Collector of Herbaceous Plants," contained in the August Number of your valuable Periodical, not having as yet met with any attention from more experienced Florists, I venture to recommend the following list of hardy perennials, which I cultivate myself, and which your correspondent may readily procure at any of the principal nurseries. I purposely omit many plants that are suitable to rock-work, having already given a list in the June Number 1835.

BOTANIC NAME.	ENGLISH NAME.	FLOWERING MONTH.	COLOUR.	HEIGHT.
<i>Achillea ptarmica plena</i>	sneeze-wort yar-row double	July to Sept.	milk white	3 feet
<i>Achillea millefolium</i>	common yarrow, or milfoil	June August	reddish purple	3 feet
<i>Allium</i>	garlic	June	yellow	1 foot
<i>Anthericum Liliago</i> (a)	grass leaved sa-voy spider wort or St. Bruna's lily	July	white	2 ft. 6 in.
<i>Aster alpinus</i>	Alpine starwort	June July	purple	8 inches
— <i>amellus</i>	amellus	August Oct.	blue	2 feet
— <i>spectabilis</i>		Sept. Oct.	blue	2 feet
<i>Antirrhinum majus</i>	great snap dragon	July August	white with a large yellow palate	2 feet
.....	....	....	white in front.	2 feet
<i>Antirrhinum majus bicolor</i>	....	....	fine deep crimson	2 feet
			crimson and white	2 feet

(a) Also called *Phalangium Liliago*.

BOTANIC NAME.	ENGLISH NAME.	FLOWERING MONTH.	COLOUR	HEIGHT
<i>Bellis hortensis</i>	garden daisy	May June	large double red	7 inches
— <i>variegatus</i>	variegated	....	white and red	7 inches
— <i>albidus</i>	white	....	white	7 inches
— <i>fistulosa</i>	quilled	....	white and crimson	7 inches
<i>Beton officinalis</i>	wood betony	July August	crimson	16 inches
<i>Calliopsis lanceolata</i>	spear-leaved tick-seed sun-flower	June Oct.	bright yellow	3 feet
<i>Calliopsis tenuifolia</i>	slender leaved	....	yellow	1 ft. 8 in.
<i>Campanula azura</i>	bell flower	June July	sky-blue	2 feet
— <i>Bononiensis</i>	....	July August	blue	4 feet
— <i>Carpatica</i>	— carpathion	June	blue	8 inches
— <i>Colina</i>	— sage-leaved	July August	blue	2 feet
— <i>glomerata</i>	— clustered	June	blue	10 inches
— <i>ritida</i>	— smooth-leaved	July	white	10 inches
— <i>speciosa</i>	— showy	June	blue	4 inches
— <i>urticaefolia</i>	— nettle-leaved meadow ladies' flower	May to Oct.	purple	2 feet
<i>Cardamine pratensis</i>	— meadow ladies' flower	April May	white	2 feet
<i>Centaurea (b) glastifolia</i>	wood-leaved century	July	white	6 inches
<i>Centranthus ruber</i>	red valerian	June Sept.	yellow (b)	4 feet
<i>Chelone barbata</i>	bearded chelone	July August	rosy red	2 ft. 4 in.
<i>Chelone centranthifolia</i>	valerian-leaved chelone	June Nov.	orange	4 feet
<i>Clematis erseita</i>	upright Virgin's bower	July	bright scarlet	3 to 5 ft.
<i>Commelina tuberosa</i>	tuberous-rooted commelina	June Oct.	sulphur colour	4 ft. 6 in.
<i>Coronilla varia</i>	various coronilla	June July	sky-blue	1(c) to 2 ft.
<i>Dictamnus</i>	<i>Fraxinella</i>	June	purple	2 ft. 6 in.
....	....	....	red	2 ft. 6 in.
	....	....	white	....
<i>Dodecatheon (d) Meadia</i>	common, or Mead's American cow-slip	May June	....	1 ft. 4 in.
<i>Doronicum pardalinches</i>	great leopard's bane	May June	yellow	2 to 3 ft.
<i>Epilobium spicatum</i>	willow herb	July	white	4 ft. 6 in.
<i>Genista sagittalis</i>	Dyers' green weed	May June	yellow	1 foot
<i>Gentiana Acaulis</i>	gentianella	March April	rich blue externally	3 inches
<i>Geranium phœum</i>	dusky crane's bill	May June	dark chocolate	1½ or 2 ft.
— <i>sanguineum</i>	bloody	June July	blood colour	1½ foot
— <i>striatum</i>	streaked	June July	white petals	1 foot
<i>Geum Quellion, or coccineum, or Chileense, or Chili</i>	avens	June July	bright scarlet	2 feet

(b) The scales of the calyx present a beautiful silvery appearance, and the veins of the leaves are prominent on both their sides.

(c) If raised from seed, but 3 feet if old roots are planted,

(d) Flowers best in the shade and peat soil

BOTANIC NAME	ENGLISH NAME.	FLOWERING MONTH.	COLOUR.	HEIGHT.
<i>Gnaphalium</i> (e)	sand everlasting,			
<i>arenarium</i>	or cud-weed	June July	yellow	11 inches
<i>Hylianthus multiflorus</i>	many flowered perennial double sun-flower	Aug. Nov.	yellow	3 feet
<i>Hesperis Matronatis</i>	common dames' violet	June	white double	1 ft. 4 in.
— <i>purpurea</i>	....	....	purple	..
<i>Lathyrus sylvestris</i>	narrow-leaved everlasting pea	July August	corolla variegated	5 or 6 ft.
— <i>grandiflora</i>	large-flowered do.	June Sept.	rose	..
— <i>latifolius</i>	broad-leaved do.	July August	fine rose-colour	..
<i>Lithospermum purpureo-cœruleum</i>	creeping or purple grom-well	May June	violet blue	1 foot
<i>Lupinus polyphellus</i>	many-leaved lupine	June July	blue	2 feet
— <i>alba</i>	....	.. .	white	..
<i>Lychnis chalcidonica</i>	lychnis or campion	July	scarlet	3 feet
— <i>plena</i>	....	July Octr.	scarlet double	3 feet
— <i>dioica</i>	batchellor's buttons	June	red	14 inches
— <i>Flos cuculi</i>	meadow lychnis	June	rose colour	1 foot
— <i>Flos Jovis</i>	ragged robin umbellate rose campion	July	rose	2 feet
— <i>Viscaria</i>	viscid, or rock lychnis	June	rose	18 inches
<i>Lysimachia vulgaris</i>	great yellow loose strife	July	yellow	3 or 4 ft.
<i>Monarda didyma</i>	twin oswego tea	June Sept.	red and white	3 to 4 ft.
<i>Anothera pumila</i>	dwf. primrose	June	yellow	6 inches
— <i>macrocarpa</i>	long fruited ditto	June to Aug.	yellow	1 foot
— <i>speciosa</i>	showy ditto	July to Sept.	white	1 foot
— <i>taraxacifolia</i>	dandelion-leaved ditto	July to Oct.	large white	6 inches
<i>Pœonia albiflora</i>	edible-rooted peony	June	white double	3 ft. 6 in.
— <i>Whitleyi</i>	rose peony	June July	rosy	3 ft. 9 in.
<i>Phlox crassifolia</i>	thick-leaved lychnidia	April	pink	1 inches
— <i>eximia</i>	choice	July August	rosy pink	2 ft. 8 in.
— <i>Lyonii</i>	....	July August	dark lilac	3 feet
— <i>odorata</i>	sweet scented	June	rose lilac	3 feet
— <i>ovata</i>	oval-leaved	June	pink	6 inches
— <i>paniculata</i>	panicked	July August	lilac	1 ft. 6 in
— <i>reflexa</i>	reflexed leaves	July August	dark pink	3 feet
— <i>setacea</i>	bristly	May	pink	3 inches

(e) Called by the French "Immortelle," and used to decorate their graves. And here I would correct a mistake I made in my list of ROCK PLANTS, as the "*Gnaphalium Armarium*" I have given there is properly "*Antennaria Dioica*" which grows three inches high.

BOTANIC NAME	ENGLISH NAME.	FLOWERING MONTH.	COLOUR.	HEIGHT.
<i>Phlox suaveolens</i>	....	June Sept.	white	2 ft. 4 in.
— <i>tardiflora</i> , or <i>longiflora</i>	late-flowering	August	white	2 feet 2
<i>Whelleriana</i>	Wheeler's	June Sept.	pink purple	3 feet
<i>Polemonium cæruleum</i>	blue Jacob's ladder—Greek valerian	May June	blue	2 feet
— <i>album</i>	....	....	white	..
— <i>Mexicanum</i>	Mexican	....	blue and white	..
<i>Potentilla formosa</i>	handsome cinquefoil	June Sept.	rose	2 feet
— <i>atrosanguinea</i>	....	....	dark blood	..
— <i>Russiliana</i>	Russel's hybrid	....	crimson	..
— <i>Hopwoodiana</i>	hopwood's	....	white	..
<i>Pulmonaria officinalis</i>	common lungwort	April	White and blue	8 inches
<i>Pyrethrum uliginosum</i>	marsh feverfew	July Sept.	white	3 feet
<i>Rudbeckia fulgida</i>	shining rudbeckia	July August	yellow & blackeye	2 feet
<i>Rudbeckia hirta</i>	hairy	....	yellow	5 feet
<i>Ranunculus acris</i>	upright crowfoot	May June	yellow	2 feet
— <i>platanifolius</i>	platamus-leaved (g)	May June	white	8 inches
— <i>montanus</i>	mountain	June	yellow	2 foot
<i>Saxifraga aizoon</i>	margined sax	May	white spotted	6 inches
— <i>crassifolia</i>	thick-leaved	April	pink	1 foot
— <i>ceratophylla</i>	shining calyxed	June	white	6 inches
<i>Symphytum officinale</i> var. <i>Bohemicum</i>	comfrey	May June	bright crimson	8 inches
<i>Stenactis speciosa</i> (h)	showy stenactis	July Oct.	dark violet	2 feet
<i>Tetragonolobus siliculosus</i>	square-podded winged pea	July Aug.	yellow	....
<i>Tradescantia Virginica</i>	Virginian spiderwort	June Sept.	bright purple	1 to 2 ft.
<i>Trollius Europæus</i>	European globe-flower	May June	yellow	2½ ft.
<i>Veronica spicata</i>	spiked speedwell	July Sept.	deep blue	4 to 8 in.
— <i>urticifolia</i>	nettle-leaved.			

Nov. 12th, 1836

R. T. W. T.

(f) Divide the root in *SPRING ONLY* when it begins to vegetate, and plant in a warm situation.

(g) Or Fair Maid of France.

(h) Seedlings of the *Stenactis Speciosa* flower freely the first year, and perfect the seed, so that it may be treated as an annual.

ARTICLE II.

ON THE CULTURE OF THE AURICULA, WITH A LIST OF
SUPERIOR KINDS.

BY G. R.

HAVING promised to send you a list of the most esteemed varieties of Auriculas which generally appear for competition at the different society-meetings in this neighbourhood, I now give you the name of a few which may be considered amongst the finest. They will, perhaps, assist some of your readers in selecting a few of the most choice-varieties; should any of them be about to commence a collection, and will give those who may be otherwise interested, an idea of the plants which are held in the greatest estimation in this quarter.

Many lists of choice Auriculas contain the names of several, the flowers of which have a great tendency to vary from the original colours, from unaccountable causes, and which, by florists, are termed sporting varieties. In the same list are found others which are liable to change colour a short time after they are fully expanded. Such flowers may occasionally be considered as fine, and might be presented for competition. Their general character however, not being such as to warrant their insertion in the following select list, I have omitted them. All Auriculas are subject in a great or less degree to present an ununiform appearance of bloom, their flowers in some seasons being much more perfect than in others. The following, when well grown, will be found to have less tendency to do so than most others. Some growers will, perhaps, find a few of those mentioned, classed differently from what they are accustomed to find the appearance of the plant when in bloom, which in some measure may be thus accounted for. Auricula-growers in general, adhere to a compost of their own in many cases differing considerably in its composition, and it therefore may naturally be supposed that the bloom of the plant, in some degree will vary accordingly. It being however a difficult matter to decide to what class they should belong, I have classed the following according to the colour of edging, which I have generally found them to present. Plants grow in very rich stimulating composts, for the purpose of obtaining large high-coloured flowers, certainly produce a beautiful green foliage, strong trusses, and large pips, but the bloom altogether is seldom fine, as being

very liable to run and become foul, by which is understood that either the ground-colour, edging, or eye, predominates, which entirely destroys the appearance of the flower: those grown in a more moderate soil generally produce a much finer and more regular flower, and beside, will have less tendency to impair the health and strength of the plant. Those persons who have grown Auriculas will not perhaps have remarked that green and grey-edged flowers are seldom so fine and true to their character when produced from a stem rising from the centre of the plant, as those produced from one rising from the side of it, and that white edges are the reverse: most perfect flowers generally being produced from a stem rising from the centre. Self-coloured flowers join with green and grey edge in this peculiarity. Shaded alpine are a class which seem to be little cultivated here, therefore I have not been able to add them to the list. There are a few plants here mentioned which as yet have but a limited circulation; they were raised in this neighbourhood by Mr. Smith, at Ellengowan, and Mr. McDonald, at Dunninald, both of whom have been very successful in raising fine varieties; several of these when well grown, have proved to be of very superior order, and, have obtained prizes at different shows in this quarter, competing against many of the finest flowers in cultivation.

Having for my own amusement grown Auriculas for several years with great success, of which my collection at present amount to two hundred and fifty strong healthy plants, comprising one hundred and forty of the finest varieties; it was my intention to have added my mode of cultivating and managing this favorite flower; but this appears to me unnecessary from the excellent articles which have appeared in several of the preceding numbers of the Cabinet, I shall therefore merely state that the compost I make use of consists of six parts of manure, at least three years old, gathered from pasture fields, and one part of white sand, and conclude by briefly mentioning the following principal points to be attended to in order to grow Auriculas in perfection.

Adhere to as simple and rich a soil as possible, avoiding all obnoxious and stimulating manures. Pay attention to good drainage at the bottom of each pot. Avoid too often reducing the fibrous roots of the plant, and examine occasionally, perhaps every three years the lower end of the main root, a part of which will require to be taken off. Do not delay making the examination, when you observe the leaves of a plant becoming spotted of a yellowish hue,

a certain sign of its being unhealthy, and the disease is often found to arise in the main root. Keep the plants during summer in a cool shaded situation during the day, giving them water occasionally. Be careful to keep them from being exposed for any length of time to heavy rains, or under the drip of trees. Place them under cover open towards the south by the beginning of November. Guard against damp by giving as much air as possible at all times. Let them have water very sparingly until February, when you may give it more freely. See that they are not exposed to any drip of water from any deficiency of the covering of the frame, whether of wood or glass. Keep the plants rather warm during the winter and spring months, which will add greatly to the expansion of the pips. Remove any damp decayed leaves from the plants, but suffer those leaves that are dry to remain until the time for top dressing. By the beginning of March add a little fresh soil to the surface of each pot: give water freely during this and the two following months. Protect well from severe frosts. Thin out pips, leaving from five to nine on each plant according to its strength. Allow but one flower stem to each plant. Contrive to give them all the air possible. Shade them from the sun when they are in full bloom by placing the front of the frame to the north.

LIST OF AURICULAS.

Green edge—Booth's freedom	Green edge.—Hedge's Britan-
Howard's Lord Nelson	nia
Mather's Brilliant	Pearson's Badajoz
Ryder's royal Sovereign	Page's Champion
Lee's Colonel Taylor	Vallington's Nottingham
Fletcher's ne plus ultra	hero
Smith's Lord John Rus-	Chillot's Britannia.
sell	Coldham's Blucher
Pollit's standard of Eng-	Clough's Dolittle
land	Barlow's King
Pollit's ruler of Eng-	Moore's Jubilee
land	Bearliss's superb
Dawson's George Can-	Streeche's Alexander
ning	
White-edge.—Campbell's Ro-	Ditto Venus
bert Burns	Pott's Regulator
Lee's Earl Grosvenor	Taylor's glory
Hugh's pillar of Beauty	Ditto Princess Royal
M'Donald's Miss Arkley	Ditto favorite
Smith's Jupiter	Wood's delight
Ditto freedom	Lee's bright Venus

Grey-edge.—Smith's General	Pearson's liberty
Bolivar	Ryder's Waterloo
Ackerley's Alpine shepherdess	Syke's complete
Clegg's General Morillo	Thompson's Bang up
Faulkener's ne plus ultra	Ditto revenge
Grime's Privateer	Ditto cottager
Hey's Lovely Ann	Taylor's ploughboy
Kenyon's ringleader	Waterhouse's conqueror of Europe.
Oliver's lovely Ann	Warris's union
Selfs—Burrie's Lord Primate	Selfs—Martins's Eclipse.
Ditto Lord Lee	Netherwood's Othello
Campbell's Lord Byron	Redman's Metropolitan.
Gorton's Stadtholder	Scholey's Ned Leed
Grime's Flora's flag	Fintu's Rosetta
Miller's Lord Howe	Whittaker's true blue
<i>Forfarshire, March 11th, 1837.</i>	

ARTICLE III.

ON THE SOIL PROPER FOR AURICULAS, AND THE CULTURE OF THE GENUS LUPINUS.

BY AMICUS FLORIBUS.

HAVING had a few of the most showy plants made a present to me, and they being, as I am told, of a superior description, I have long wished to get a recipe from your extensive, and well regulated Cabinet. I was perusing the number for February, in the present year, and felt myself very much gratified, to find some information on the culture of the above named plant. (by James Shepperd.) He gives very good remarks on the cultivation of the plants, but omits the preparation of the soil used; he recommends a light, rich, and sweet soil: now for an amateur, this appears rather complexed. He also says, he has for the last ten years, followed the plan laid down by Mr. Emerton, but loosing so many plants, he feels convinced, that his plan is not a good one. Would he be so kind as to favor me with his recipe, or if not, the compost used by Mr. Emerton, it would, I feel convinced, confer a great favor on many, besides one, who subscribes himself

AMICUS FLORIBUS.

P. S. Should this be accepted, I herewith send you a method of cultivation, which I adopted among that splendid variety of plants, the Lupinus. At a time when these plants were scarce, I was

fortunate enough to possess the *Lupinus Marshallianus*, but wishing to make the most of it, I adopted the following method for its cultivation ; in the month of March I took some shoots off, (that is) when they had attained the height of an inch or two from the ground, I planted them in a stiff loamy soil, and copiously supplied them with water, and in four or five weeks, to my great surprise, they were rooted ; I then transplanted them in my flower beds, and to my satisfaction, had them flower the same year, thus from one plant, I had five or six all blowing the same year. The reason of my sending this, is, on account of not having seen any thing of the kind in your valuable and extensive work, and thinking that those who possessed a choicer species would be able to propagate and have a more copious supply. If I have commented too largely on the subject, would you be so kind as to frame it in a more compact compass, to oblige one, who is, and whose friends are true patrons, and well wishers to your widely circulated Cabinet.

ARTICLE IV.

ON THE CULTURE OF THE DAHLIA.

BY S. R. P.

PERMIT me, at any convenient opportunity, the use of your widely circulating medium, the Floricultural Cabinet, to publish a method by which the disappointment so often experienced by amateur growers of Dahlias in the loss of their roots, during the winter, may be avoided, and by which simple means, I have preserved the tubes of these truly splendid flowers, through the dormant months, in the greatest perfection. Let any of the usual means be employed of propagating duplicates of the sorts required to be saved ; but I will describe my own. I take from the growing plants the first lateral shoots, divide them with a sharp knife, under the third joint from the top, and cut off the two bottom leaves a little distance from the stem, without mutilating the eyes that will be seen in the axils of the leaves. These are planted so as to touch the side of the pot, which, if convenient, may be plunged in a little heat ; as soon as they have made roots, they are planted singly in 60s. and finally repotted into 48s. every flower bud is removed, and the growth of the plant promoted till the middle of September,

VOL. V.

L

when the supply of water is diminished, and at the end of the same month, all moisture is suspended : the tallies are firmly fixed, and the pots are set at rest, under the stage of the green-house (a cellar will do) where, by the close adhesion of the earth to the roots, occasioned by the pressure produced in the growth of the tubers, they are preserved in a perfectly plump, sound, and healthy state : not a root can be broken, or an eye disturbed ; besides these advantages, I am led to believe, that their being set thus early at rest, according to a known law in vegetation, there is a tendency to push their buds at an earlier period, than by the usual mode of treatment.

S. R. P.

ARTICLE V.

BOTANICAL CURIOSITY OF THE HYACINTH,

BY W. BRIANT, GARDENER, UPPER GORE HOUSE, KENSINGTON.

I believe it has been asserted by Sir Humphrey Davy, that no species of plant will vegetate downwards. With every respect for that great man, I beg leave to tell you, and, through you the readers of the Cabinet, that such is not the fact, as I have in more than one instance proved. Curiosity induced me at the time of putting in my bulbs, (October) to plant four Hyacinth bulbs in the following manner ; I am particularly fond of the single blue Hyacinth, and therefore singled these out for my object, after procuring my regular compost, which is a mixture of leaf mould, yellow loam, and white sand, I placed one Hyacinth bulb at the bottom of a 48 pot, with the crown through the draining hole, and commenced filling up my pot in the usual manner, and then planted one at the top, and taking it to the green-house, I cut a circular hole in the shelf, so as to admit the pot half-way down.

Both bulbs did vegetate freely, and seemed to vie with each other; before the flower expanded, I procured a long glass, such as confectioners has for show glasses, and placing the pot on the top of the glass, it seemed to give additional vigor to the flowers to expand, its appearance now, is strikingly beautiful, the natural fragrance of their flowers, combined with the peculiarity of the

growth, would entitle them to true lustre on any lady's toilet, or drawing room table, and such is the deception, that I have been asked by several, if both flowers did not come from the same bulb.

ARTICLE VI.

ON GRAFTING THE ROSE.

BY ROSA.

The following method of cultivating the Rose by grafting, is very interesting, and successful, as well as having the advantage of economy, as you make use of the cuttings of the pruned trees, which would otherwise be lost. It must be remembered, however, that it should only be practised upon free well rooted stocks, as otherwise the delay in the rising of the sap, and the uncertainty of the supply, frequently defeat the purpose. Grafting, therefore, should succeed budding on the same stock, not precede it: as a bud failing on the stock, if the branch be not destroyed while the sap is up, leaves the stock still vigorous in the ground; if therefore you wish to try this mode it, should be upon stocks that have had a spring to root themselves.

The points to be desired, are, that the barks of scion and stock should be cut quite smooth, and not separated from the wood they grow upon—that neither should be bruised—when they are put together they should fit close—a supply of sap should commence as soon as possible—that all sun, wind, and rain should be kept from the wound till healed, and that no ligament should be removed, nor shake given to the parts newly placed in contact, till they are perfectly healed; any jar to the scion when placed is likely to defeat the purpose.

GRAFTING.

If you have a good choice of shoots in March, from your trees, which you desire should not be wasted, examine your shoots after pruning each tree, select those which are the finest, and place their thickest ends (taking care that the produce of each tree be tied in a separate bundle and ticketed) in a lump of moist clay an inch deep, pinch the clay tight round them, and then put the lump of clay in a pot full of earth (leaving the shoots out) until ready for use,

It must be remembered at that the end of each shoot there will probably be one or more buds open; these must be carefully cut off from the shoot or they will infallibly exhaust the others.

Let the shoots remain for three weeks in an outhouse, or any place neither very dry nor very damp, where neither wind nor sun can come in contact with them.

During the first week in March, cut off your stock, (in which the sap should be beginning to rise,) horizontally; make a slit in it, straight downwards, of a couple of inches, or an inch and a half long, taking care not to injure the sides of the bark.

Take the shoot in the left hand, and leaving three buds upon it, or two if the stock be not large; cut the lower extremity of the shoot in the shape of a wedge, the back being rather the thinnest and the lowest bud about half an inch above the thick end of the wedge. In doing which, care must be taken that the bark be undisturbed, and each scion so cut that all the buds point outwards, or at any rate, be so placed that the shoots from them may not interfere with each other.

With the end of your budding-knife, or a little wooden or ivory wedge, open the slit in the stock on one side, and then place the scion, with the thickest part or front outwards, in the other, taking care that the edge of the inner bark or liber of the scion touches the edges of the inner bark of the stock, all the way down; pull out the wedge and enter another scion in its place, the slit being kept open by the first; if the size of the scion be half the size of the stock, you may leave a shoulder to the scion, and thus increase the chances of success.

Any number of scions may be inserted in the same stock, but from one to four are all that are desirable in the present case, to cover well over the head of the stock which is apt to receive much injury from the weather, if not carefully attended to.

The object of laying by the scions, is that the stock may be the forwardest, and be enabled to supply the sap, and force them forward at once, instead of lingering while they perish from exposure and want of nourishment. Whether this danger might be entirely removed by the following new mode of grafting I have not yet had an opportunity of trying.

Leave a small end to the scion, with bark, &c. upon it, and having finished your graft as above, turning the overplus outwards,

and below the clay, insert it in a small phial, kept constantly filled with water, in order to keep the scion fresh until the junction takes place. When well established, remove the phial and cut off the overplus close to the stock, covering it with cement.

When the shoots are on, tie up the whole with a bass ligament, to prevent the scions from ever shifting, and then cover the whole beneath the lowest bud, with grafting clay, taking care to exclude air, sun, and rain. If the clay crack, it must be renewed, not by shifting, but by filling up the crack.

In about six months, the clay may be removed, and the wound covered with mixture, this latter must on no account be omitted.

The choice of scions is regulated by the same rules as the choice of buds, only that in choosing scions some reference must also be had to the wood, which should have a sufficient thickness to keep it from getting dry easily, and to facilitate the operation of sloping the edges. The best buds are generally nearer the base of the shoot than the summit, but two or three scions may sometimes be got from a single shoot. No scion should be used when the buds upon it appear to have shrunk and lost their fulness, from having been laid by, and care should be taken on passing the bass ligament round the stock for the purpose of fixing the scions, that a piece of the bass be brought between the scions in such a manner as to protect the cleft in the centre of the stock from the clay, and to leave the vacuum to be filled up with sap.

Should any graft fail, which will be seen in a longer or shorter space of time, according to the weather, (*viz.* in moist, dull, growing weather it will soon show, in that which is dry, windy, or cold there will be delay,) you have still the resource of knocking off the clay and reserving for use the fresh buds which start from the stock, in which case, cut the stock off immediately above them, and bud in the following autumn as usual.

Grafting the rose, however, leaves a worse wound to heal over than budding, unless the scion be nearly the same size as the stock, or two or three scions of free-growing sorts be entered in the same graft: there is also this disadvantage, that the portion of the scion that is entered in the stock is smooth, and consequently does not from time to time furnish new wood, whereas in budded stocks, shoots occasionally spring from the inserted eye, (and that sometimes years after it has taken.) thus renewing the tree

by preventing it from straggling, as well as giving it a more perfect and handsome appearance.

The advantages of grafting, are, that it clears your garden of wild growing stocks, promises fair for instant success, especially when the scions are from hardy sorts, such as the Du roi, Maiden's blush, &c. and your work is complete and tree formed, and in some cases, flowers in a single season.

In the event of your having neglected to procure stocks, the operation of grafting may be performed equally well with budding upon plants in a neighbouring hedge, and those that succeed can be transferred to the garden at leisure.

ARTICLE VII.

ON THE CULTURE OF THE NELUMBium.

BY C. B. B.

HAVING suggested to your readers the experiment of growing tender aquatics in warm water tanks, and observing that the Horticultural Society have been distributing seeds of *Nelumbium Luteum*, I think a hint on the mode of raising that, and the East Indian *N. Speciosum* may not be amiss, as without such instruction, probably not one person in fifty of those who receive the seeds will rear the plant. For some reason or other, probably to preserve a seed which by sinking in deep water, or being buried in mud, is exposed to many casualties, the seeds of *Nelumbium*, are furnished with an exceeding hard coat, which as long as it remains uninjured resists all soaking, whether in cold or warm water. In order to induce them to vegetate in any reasonable time, it is necessary to file the blunt end of the seed, until it just yields to the pressure of the nail. Thus prepared, the seed should be thrown into a pan of water, the temperature of which is not above 70 degrees. When first sown it sinks, but in the course of forty-eight hours it will begin to push, and as soon as the seed-leaves have protruded a few inches, the young plant rises to the surface, where its leaves expand, and it floats. In a short time it throws down a runner, much like that of a strawberry, which descends to seek the mud. This runner throws out roots, and sends up a leaf and from its extremity a similar runner again descends, and

again another, each rooting and throwing up its leaf, until at length the plant reaches the mud, when it takes root, and begins to produce strong leaves. The best method is to sow the seed in a pan a foot or eighteen inches deep, having four or five inches of stiff mud at the bottom. It is useless, and probably would be injurious to cover the seed with earth, those which I tried to plant in this manner, invariably came up and floated, and if effectually buried, the seed would most likely decay; *Nelumbium Luteum*, seems to delight nearly in the same treatment as its East Indian relations, and the rich deep velvet green of its leaves, form a beautiful contrast to the bluish white of that species. I have not seen its flower, but understand that it resembles *N. Speciosum* in every thing but colour.

Whilst on the subject of aquatics, it may be well to mention that *Nymphæa Lotus* grows very freely from seeds, if they are allowed to seed themselves in the water when ripe, and this is the best way of preserving the species, they come up in the following spring, and flower in the summer. The old roots are very apt to perish. *Nelumbium Luteum*, and *Nymphæa Cœrulea* will probably prove the hardiest of all the tender water plants: but collectors must distinguish between the true *N. Cœrulea*, a very strong and luxuriant growing sweet scented species, and *N. Stellata* a small elegant plant much more tender. I fear, however, that this caution is almost needless, and that *N. Stellata* has disappeared from our collections. The remark may, nevertheless, induce some one who is fortunate enough to possess it, to cherish the delicate stranger, and give it the attention which its tropical nature requires. It is a native of Malabar. *N. Cœrulea* is, I believe, from the Cape of Good Hope.

C. B. B.

ARTICLE VIII.

A LIST AND DESCRIPTION OF CARNATIONS,

BY PENSEE.

I SEND you a list of Carnations with remarks on the merits and faults of each. Should it be considered worthy of a place in your Cabinet, I shall follow up this criticism with another paper,

or two on the same subject, and in like manner pass my opinion on Piccotees, Heartsease, Ranunculuses, and other Florists' flowers.

PENSEE.

[We shall feel grateful for the favour, such articles being very much wanted by the readers in general of the Cabinet, many applications have been made to us by subscribers—CONDUCTOR.]

CARTWRIGHT'S RAINBOW (*crimson bizard.*)

This flower is, perhaps, as well or better known than any other Carnation, can never become common from its shyness in producing grass and propensity to run from colour on the latter account, I have no doubt many plants are constantly thrown out, though in future I would recommend this never to be done, as I believe it possesses a property known in no other bizzard, viz. of returning to colour: two or three instances of this had come to my knowledge when I happened to mention it to one of our first growers, who stated that he had made the same remark, and added that if the flower did not run into a perfect self, he believed it invariably came into colour the following season. The Rainbow is a large flower, very fine in shape, good in each colour, and almost unequalled in the white.

FLETCHER'S DUCHESS OF DEVONSHIRE, (*scarlet bizard.*)

The only fault, and one which cannot but be admitted, is its want of size, in every other respect, in colour, in shape and substance of the petal (in my opinion, a great desideratum) and in the general shape of the flower, it is equal to any in its class: it is very generally grown and as generally admired

(WAKEFIELD'S PAUL PRY, C. B.)

This is a higher coloured flower than the Rainbow, but is seldom as large, though a general good bloomer, yet wanting the splendid guard leaves and size of the Rainbow, can never demand comparison.

WILSNES'S DEFIANCE, (*purple flake.*)

Is a large flower, good in colour, but occasionally deficient in the stripe, or rather the stripe is not equally spread over the bloom, one petal having too much, whilst another is wanting. Yet I have sometimes seen this flower so very fine, that I should consider a collection deficient without it

(*To be continued.*)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. *ACROPERA LODDIGESII*, Mr. Loddiges' *Acropera*. (Bot. Mag. 3563.) Natural Order, Orchidaceæ. Linnæan Class, Gynandria; Order, Monandria. Synonym; *Maxillaria galeata*. The flowers of this plant are very singularly handsome: they are produced numerously in large pendant racemes, each flower is about an inch and a half across. Sepals of a pretty brownish-yellow. Lip of the same colour. Column, greenish-yellow spotted with red. The plant was introduced into this country by Mr. George Loddiges, from Xalapa of Mexico, and has bloomed in Mr. Loddiges' collection, and in that of the Glasgow Botanic Garden. It merits a place in every collection of Orchideous Epiphytes. *Acropera*, from *akros*, the extremity, and *pera*, beyond, alluding to the little saccate appendage at the tip of the Labellum.

2. *ANAGALLIS MONELLI*, Var. *Celacina*. Lilac flowered Italian Pimpernel. (Brit. Flow. Gard. 377.) Primulaceæ. Pentandria Monogynia. This very handsome flowering variety has been raised between A. Monelli and A. Fruticosa. It has flowered in the collection of the Hon. W. T. H. F. Strangways, Abbotsbury Castle, Dorsetshire. The flowers are of a rosy, lilac colour, about the size of A. fruticosa. It is a very pleasing variety, well meriting a place in every collection. This as well as its parents are very beautiful flowering plants for a bed in the flower garden during summer, where they make a most brilliant display. Botanists, in general, seem now agreed, that the A. Monelli and A. Grandiflora are nothing more than mere varieties. *Anagallis*, from *anagaleo*, to laugh, applied by the ancient Greeks to a plant beneficial in diseases of the liver.

3. *BEGONIA MONOPTERA*. Single Winged. (Bot. Mag. 3564.) Begoniaceæ. Monœcia Polyandria. Mr. Otto, of the Royal Berlin Garden, has most obligingly sent over to this country several highly, interesting, and ornamental species of Begonia. The present species is very handsome. The flowers are white, produced numerously in a terminal raceme. The stems and leaf stalks are of a light red colour, as is the under side of the leaves. The plant is a native of Brazil, from whence it was sent by Mr. Döppe. *Begonia* in compliment to M. Begon.

4. *CEREUS SERPENTINUS*. Serpent-like. (Bot. Mag. 3566.) Cactææ. Icosandria, Monogynia. Mr. Mackay of the Norwich Nursery, purchased the very fine collection of succulents formerly belonging to Mr. Hitchin, and the present species has bloomed with Mr. Mackay. It is a night blooming species, the flowers remaining expanded about as long as C. Grandiflorus. The flowers are of a pale whitish flesh colour inside, and a reddish black colour outside. The tube is about four inches long. *Cereus*, from *cereus*, pliant, alluding to the shoots.

5. *CEROPEGIA STAPELIIFORMIS*. Stapelia-like. (Bot. Mag. 3567.) Asclepiadææ. Pentandria Digynia. This most curious flowering plant has bloomed in the Glasgow Botanic Garden, where it had been sent from Kew Gardens. It is thought to be a native of the East Indies, and requires a hot-house temperature. The stems very much resemble those of a Stapelia. The flowers are very singular. Corolla two inches long; tube curved, expanded upwards to form the limb, which is cut into five segments, they are dark purple outside, white and hairy within. The tube is of a greenish white, much spotted with deep purple. The five segments of the corolla curve backwards, and the sides reflexed, so that the upper side having the form of a sharp keel, presenting a most singular appearance. *Ceropegia*, from *keros*, wax, and *pege*, a fountain.

6. *CHRYSEIS COMPACTA*. Dwarf Chryseis. (Bot. Reg. 1948.) Papaveraceæ. Icosandria Tetragynia. Synonym. *Eschscholtzia compacta*. The Vol. v. M

present species differs from *C. crocea*, and *C. californica*, in being of a more dwarf habit, and very compact in growth. The flowers too are rather less; they are of a fine bright yellow, with a deep orange centre. The plant deserves a place in every flower garden. *Chryseis*, a celebrated Homeric beauty, the name alluding to the gold colour of the blossoms.

7. *CLARKIA GAUROIDES*. Guara like *Clarkia*. (Brit. Flow. Gard. 379.) Onograria. Octandria Monogynia. A hardy annual, sent by the late Mr. Douglas from California, to the London Horticultural Society, in whose garden it has bloomed. It is not near so handsome as either *C. palchella*, or *C. elegans*. The flowers are about an inch across, of a lilac-purple colour. They are produced on terminal racemes, but the blossoms are very distant from each other, much more so than in *C. elegans*. *Clarkia*, in compliment to captain Clark, who accompanied captain Lewis to Rocky Mountains.

8. *DATURA GUAYAQUILENSIS*. Guayaquil. Thorn Apple. (Brit. Flow. Gard. 380.) Solanaceæ. Pentandria Monogynia. Mr. Tweedie sent seeds of this species from Peru to Dr. Neill, in whose fine collection at Cannon Mills, near Edinburgh, it has bloomed. It had been grown in the stove. It appears that it blooms in February and March: in its native country, where it grows abundantly in moist places, on the shores of the Pacific, near Guayaquil. The plant is annual, growing three feet high. The flower, with its tube, is about six inches long; corolla, upper half white, lower part greenish. The mouth of the flower opens about two inches. It is very probable that good strong plants, planted out in the open border during summer, would bloom very freely.

9. *DELPHINIUM BARLOWII*. Mr. Barlows' Larkspur. Ranunculaceæ. Polyandria Trigynia. This very superior variety was raised by Mr. Barlow, near Manchester, some few years back. The splendour of its fine double blossoms, renders it a very desirable plant for every flower garden. It blooms during a greater part of summer, its fine blue flowers, tinged with a purplish hue at the centre, produce a most charming effect. The spikes rise from three to seven feet high. The plant may be had of most Nurserymen, or Florists. *Delphinium*, from *Delphin*, a Dolphin, the resemblance of the nectary of the flower.

10. *ECHINOCACTUS SESSILIFLORUS*. Sessile-flowered. (Bot. Mat. 3569.) Cactaceæ. Icosandria Monogynia. Bloomed in the fine collection of Mr. Mackie of the Norwich Nursery. The spines are short and white; the plant blooms freely, producing several blossoms every year.—Mr. Mackie cultivates the *Echinocactus* tribe with great success. The plants are grown very near the glass, and in the summer time, in a very high temperature, by keeping the top sashes of the house closed. Strong light and heat are very necessary for the blossoms expanding in perfection. Some of the kinds close their blossoms immediately on being removed to a cooler place. It is very necessary to have the pots well drained, as the roots are liable to decay if the earth is at all sodden with moisture. All the kinds thrive best in a good encircled soil, well drained and planted in small pots.

11. *EPIDENDRUM DIFFUSUM*. Spreading Epidendrum. (Bot. Mag. 4565.) Orchidææ. Gynandria Monandria. A native of Jamaica, where it is a frequent inhabitant of the trunks of trees. It has bloomed in the collection at the Glasgow Botanic Garden. The flowers are pointed in terminal panicle, six to eight inches, or a foot long, very branched. The flowers are small, little more than half an inch across, very narrow petals, of a light greenish yellow colour. The flowers are rather uninteresting, *Epidendrum*, from *epi*, upon, and *dendrum*, a tree, growing upon.

12. *GESNERA LATERITA*. Brick-red. (Bot. Reg. 1970.) Gesneraceæ. Dydynamia Angiospermia. The plant is a native of Brazil, and has bloomed in the stove in the garden of the London Horticultural Society. The flowers

are of a fine red colour, an inch and a half long. *Genera* in compliment to C. Gesner, a celebrated Botanist.

13. *LACHENALIA PALLIDA*, Var. *Cærulescens*. Blue-flowering pallid *Lachenalia*. (Bot. Reg. 1945.) A native of the Cape of Good Hope, where it occupies the situation as that of the blue-bells and squills of the European countries. The flower spike is about five inches long, each flower nearly as large as a common blue-bell, of a light-blue colour. *Lachenalia* from—

14. *LÆLIA ANCEPS*, Var. *Berkeriana*. Mr. Barker's variety. (Bot. Reg. 1947.) Orchidaceæ, Gynandria Monandria. It is a striking variety of *Lælia anceps*, it differs however in the petals being much narrower, but much the same size as the sepals. The middle lobe of the lip is narrower and sharper. The sepals and petals are of a beautiful lilac colour, much like *Cattleya labiata*. Each flower is about four inches across. The Labellum is of a dark crimson red colour, with the inside white and striped. The plant is a native of Mexico, imported by Messrs. Lowe, & Co., Clapton Nursery. It has bloomed in the collection of George Barker, Esq., Birmingham.

15. *LIMNANTHES DOUGLASSII*. Mr. Douglas's *Limnanthes*. (Brit. Flow. Gard. 378.) Limnantheæ. Decandria Monogynia. This family appears to hold an intermediate station between Geraniaceæ, and Tropæoleæ. It is a hardy annual, thriving best in a soil composed of peat and loam. The stem of the plant rises about nine inches high, branched, flowering freely, each blossom being about an inch and a half across. The lower half of the flower of a bright yellow, the upper half white. Altogether being pretty. *Limnanthes*, from *limen*, a lake, and *anthos* a flower. Alluding to its habits.

16. *MENOCHANTHI ET MYANTHI, ORISTATI PROLES BIFORMIS*. Orchidææ. Gynandria Driandria. A plant of the *Myanthus barbatus* flowered in the fine collection at Chatsworth, and it also produced a perfect spike of *Myanthus cristatus* at the same time. A vigorous state of culture has a tendency to favour the production of monstrous flowers. A gentleman, who resides in Demerara, states that a flower spike of *Gatasetum*, often has on it several distinct kinds of flowers. The spike of bloom at Chatsworth had seven flowers of *M. cristatus* at the upper part of the spike, and seven of *M. barbatus* below them. The flowers of the former are of a greenish-yellow colour, destitute of any spotting with darker. Those of the latter are green spotted with red. The lip has a number of fleshy teeth projecting from the sides and end. Dr. Lindley states in remarks on this sportiveness in orchidææ, that, "the necessary consequence of this in the case of *M. barbatus* and *cristatus* is, that the supposed genera *Myanthus* and *Monachanthus* must be restored to *catasetum*," And Dr. Lindley further observes, that, he has no doubt that the genus *Mormodes* must share the same fate.

17. *ONCIDIUM CEBOLLETA*. Round-leaved. (Bot. Mag. 3568.) Orchidææ. Gynandria Monandria. Synonyms *Epidendrum Cabolleta*. *Epidendrum juncifolium*. *Oncidium juncifolium*. *Cymbidium juncifolium*. Dr. Sir W. J. Hooker observes, "that, I am not aware that the flowers had been seen in this country, till a fine panicle appeared in the stove of the Glasgow Botanic Garden, and another plant blooming in the collection of Charles Horsfall, Esq., Liverpool. The plant is a native of Trinidad. The flowers are produced numerously on a scape about two feet high, much branched and panicked. The flowers very much resemble those of *Oncidium flexuosum*. They are of a bright sulphur yellow colour, spotted with deep red, producing a very neat and pretty appearance. The plant deserves a place in every collection.

18. *PENTSTEMON CREVIFLORUS*. Short-flowered. (Bot. Reg. 1946.) Scrophularinæ. Didynamia; Angriospermia. A native of California, from whence it was sent to this country by the late Mr. Douglas. It is a hardy perennial, of delicate habit. It produces a profusion of flowers which are small, of an orange red outside before expanding, afterwards of a white and purple

colour. Though not as showy as many of this tribe, yet it is an interesting and pretty plant.

19. *TRICHOCENTRUM FUSCUM*. Brown-flowered. (Bot. Reg. 1951.) Orchideæ. Gynandria; Monandria. Introduced into this country by Mr. Knight from Mexico, with whom it has bloomed in July last year: the flowers are small but pretty; green, white, red, and yellow intermixed. Neat and pretty.

REVIEW.

The science of Botany by Hugo Reid, 24mo. pp. 103. John Reed Glasgow, 1837. Contents, 1st, What is a plant. 2nd, Cells and tubes. 3rd, The root. 4th, The stem. 5th, Leaves. 6th, Appendages. 7th, Nutrition. 8th, The flower. 9th, The fruit and seed. 10th, Propagation of plants. 11. Linnæan method of arranging plants. 12. Natural system for classifying plants. This small and neat publication on the interesting science of Botany contains *multum in parva*. We think it well worth procuring—An extract will shew the nature of the work:

"THE STEM.—The stem is an organ possessed by most plants. It grows upwards from the root, gives support to the leaves, the flowers, and the fruit, and transmits to them the nutritious fluids absorbed in the earth.

"With respect to structure, stems may be divided into three great classes which correspond with the three natural classes into which vegetables are divided,—Cellular, Endogenous, and Exogenous Stems.

"CELLULAR STEMS,—These consist of a homogeneous mass of cellular vegetable matter, covered by a thin cuticle. Some of them are apparently of a fibrous texture, but are composed of elongated cells placed parallel to one another. Mushrooms (*Fungi*), Lichens, Sea-weeds, the lower orders of plants, make up this class, the leading character of which is to consist of cellular tissue alone. The Ferns, and one or two others, have certain kinds of vascular tissue, but resembling this class in other respects, have generally been included in it. Plants of this kind are *Flowerless* or *Cryptogamic* and are termed *Acrogenous*, growing only by addition at their external points."

"ENDOGENOUS STEMS.—These consist of bundles of vessels irregularly dispersed through cellular tissue. The Sugar-cane, Solomon's Seal, the Lily, the Palm, and the Iris, have this kind of structure, the cellular and vascular tissues being blended together through the entire substance of the stem.

"Stems of this kind are called *Endogenous*, because the new matter by which they increase in diameter is added interiorly. Their growth is carried on by means of the thick cluster of leaves by which they are terminated superiorly. From them the new matter descends along the centre of the stem, and pushes outwards the parts first formed. The upper parts of the leaves perish having performed their functions; their bases remain, are pressed together, and form at the top the new external part of the stem. In the middle of the crown of leaves is the terminal bud, which is next to be developed, rise a little above the former, become a cluster of leaves, and in its turn be pushed outwards by a succeeding central bud.

"The oldest and hardest part of such stems is that nearest to the circumference. The more the external parts are pressed by the descent of the new matter, the more close and compact they become, the outer parts being soon incapable of being much farther pushed out, and the whole being thus compressed and condensed. The prickly Pole-palm is like whalebone externally, and some palms are so hard there as to resist the stroke of the axe—yet quite soft in the centre.

"From the mode of growth in this stem it never can attain a great thickness, the new matter having to force outwards all the previously formed matter, which is every season increasing in quantity and becoming harder.

"From the same cause they have no lateral buds—no branches. Buds (which produce branches) originate from the soft and juicy parts of the tree—but in endogenous trees this is surrounded by a thick hard compact casing through which the buds cannot penetrate. Their only branches are, the splendid crown of leaves which proceeds from their one bud at the summit.

"Hence the peculiar form of the palm trees, which present so striking a feature in the scenery of tropical climes, and form such a contrast with the trees in more temperate latitudes; raising a narrow unbranched stem often to a height of about 150 feet, crowned by a magnificent cluster of leaves many feet in length bending elegantly outwards, and presenting altogether one of the most graceful objects which can adorn a landscape. From their great height, which renders them tottering, and their manner of growth, which causes them in time to become hard and compressed, even in the centre, so that they cannot transmit juices from the root, or new wood from the leaves—the age of Palms is limited—perhaps not exceeding two or three centuries at the utmost.

"Plants with endogenous stems have only one cotyledon (lobe) in the seed (hence called monocotyledonous,) and have leaves with veins proceeding in simple lines from the base to the summit, not forming a net-work as in the leaves of the Lime tree, Cabbage, Primrose, &c. Contrast, in this respect, the plants just mentioned with the grasses, onion or lilly tribe.

"**EXOGENOUS STEMS.**—The third class of stems consists of those in which are observed concentric layers of vascular tissue, arranged symmetrically round a central column of cellular tissue, intersected by rays of cellular tissue proceeding from the centre towards the circumference, and enclosed by a hollow cylinder of bark.

"*The Epidermis or Cuticle.*—The epidermis is a thin membrane, resembling much the cuticle of animals, and extending over the whole plant. It is described as consisting of a layer of fine membrane provided with pores, and covering a sort of cellular net-work. These pores open by an oval aperture, surrounded by a small prominence (which is supposed to open or shut the aperture as circumstances may require,) into the cellular net-work, in which the vessels terminate. On the leaf the cuticle is a very important organ.

"These pores or stomata give free passage to moisture. They are found only on parts exposed to the air, and which evaporate freely. Roots, fleshy, fruits, and seeds, and those parts of aquatic plants which are submersed, are destitute of stomata.

"The cuticle is supposed to protect the parts underneath from the too direct action of air and water, to prevent too great evaporation of the fluids. It affords little protection from heat or cold, except when covered by a thick hair or wool as in the Great Mullein. On the trunks of the Fir, the Plane, the Oak, and other trees, the office of the cuticle seems to be performed by dead layers of bark, or of herbaceous integument, which are pushed outwards, having performed the functions for which they were made.

"In forest trees and in the larger shrubs, the bodies of which are firm and of strong texture, it is of little importance, except in the young and tender state of the plant; but in the reeds, the grasses, canes, and the plants having hollow stalks, it is of great use, and is exceedingly strong; and by the microscope, seems to be composed of a grassy net-work, which is principally siliceous earth. This is the case in the Wheat, in the Oat, in different species of Equisetum, and above all in the Rattan, the epidermis of which contains a sufficient quantity of flint to give light when struck by steel. The siliceous epidermis serves as a support, protects the bark from the action of insects, and seems to perform a part in the economy of these feeble vegetable tribes, similar to that performed in the animal kingdom by the sell of the crustaceous insects. I have ascertained, by experiment, that siliceous earth generally exists in the epidermis of the hollow plants.

To be Continued,

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON BOW'S SUWARROW PINK.—Could you or any of your pink growing friends inform me the best method of growing Bow's Suwarrow Pink in order to avoid disease, I selected it from different collections last year, and I have lost them all again; I may here remark that I have grown it in rich and poor soil, but I cannot keep it more than one year. J. F.

ON CANADIAN POPLAR AND DOLICHOS.—Can you or any of your correspondents, kindly inform me of the proper method and season for propagating the Canadian poplar, or what I consider such; a tall branching tree, having leaves, larger than a man's hand, and which produces no suckers.

Also how to produce flowers on a Dolichos (of which I am ignorant of the specific name,) the flowers are pink, and about the size of anthyllis vulnaria, (lady's finger) which I raised from seed five or six years ago, and have kept in a pot. Does it require a rich soil, and will it bear to have the earth much shaken from the roots in repotting? F. S.

ON THE CULTIVATION OF THE GENUS PASSIFLORA.—I shall be much obliged if you or any of your correspondents can inform me of the best method of cultivating the genus Passiflora in their several departments, in order to ensure an early bloom from young plants, and also as regards their subsequent management. A CONSTANT READER.

ON THE FLOWERS OF THE CAMILLIA FALLING OFF BEFORE EXPANDING.—Having a number of plants which often going through the regular process generally recommended, such as potting, introducing into heat to moisten and to mature their buds; afterwards being set in a shady situation out of doors during the summer and autumn; when taken into the greenhouse, the buds keep frequently dropping off, so that at the time of flowering, instead of having several dozen blooms upon a plant, I am disappointed in not having more than one dozen, and in some cases, not one flower.—To be informed through the medium of the Cabinet in what part of the process I am deficient will greatly oblige an AMATEUR.

ON WISTERIA SINENSIS.—Having several plants of the Wisteria Sinensis planted in different situations in my garden which grow vigorously but do not blossom, I shall be glad to be informed through the pages of the Cabinet, by you or any of your correspondents of a successful method to make them bloom.—I shall very likely favour you with answers to these queries myself. A SUBSCRIBER.

ANSWERS.

ON DOUBLE FLOWERING CLARKIA.—Through you in answer to Mr. King of Black Heath, relative to the ANNUAL, Double flowering Rose coloured Clarkia which he notices in my advertisement in the Cabinet, few I presume, more than Mr. K. having heard of it before I advertised it, though I have had it these last two years, it was imported and flowered at the Nursery of Messrs Rivers last summer, where it was very much, and in my humble opinion, justly admired, for being greatly superior to any of the other varieties in point of colour. The majority of plants, having had flowers, that were strictly speaking, double.

Being satisfied that even those that came single, were more beautiful than

the old varieties, I put "fine" after it in the Cabinet, which I would not have done for the sake of sale in preference to give an opinion on any thing which experience would not afterwards fully verify. As Mr. King anticipates it will be a very great acquisition to the flower garden; should Mr. King or any other of your readers require further information, I would refer them to Messrs. Rivers of Sawbridgeworth, who I think would give a better description of it, than your obedient servant,

J. KERNAN.

4, Great Russell Street, Covent Garden, London.

A LIST OF SUPERB GERANIUMS.—Thinking that a list of the best Geraniums might be useful to some of your readers, I herewith send you the annexed list of thirty of the best kinds that were let out last year.

Bella Donna	Miss Sophia
Bellissima	Miss Annesley
Coriolanus	Nosegay
Commemoration	Perfection
Constance	Pulcherimum Novum
Curate	Queen Bess
Diomede	Queen of Beauties
Emperor of the West	Queen of Pixies
General Washington	Rosinant
Indian Chief	Roxana
Lady Denbigh	Sir John Broughton
Lavingtoniensis	Speculum Mundi
Lord Hill	Squaw
Maid of Athens	The Gem
Miranda	The Wonder

The above may be purchased of any nurseryman either in town or country 5s to 21s. They are really good and might have an extensive cultivation.

March, 14th 1837.

A LOVER OF FLOWERS.

REMARKS.

ON ROSES, PINKS, &c.

Whenever Roses or any other shrubs are infested with blights, take sulphur and tobacco dust in equal proportions, and strew it over the trees in the morning, when the dew is on; and when the insects disappear then wash the tree with a decoction of Elder leaves.

Whenever you want to raise any plants from cuttings (except those that are perfectly hardy, let there be a mixture of drift sand in the mould, as this will assist their striking, always remembering that a hand-glass put over them will be more likely to ensure success. They should be shaded from the mid-day sun; but the mat should be removed when the sun is off, as they should have plenty of light.

To draw off any imperfect spots in Pinks or Carnations, put a small glass on the flower-stick which will remove them in a few days.

Before you plant Ranunculuses, the roots should be laid on a damp flannel to swell; and shake over the bulbs a little dry sand, before they are covered with the mould.

If Greenhouse plants are in a room, and the weather is very severe, set a pail of water near them at night, or burning two or three rush lights will often preserve them from frost.

Double Colchicums and Crocuses should remain in the ground two years.

Old Pink roots best to save seed from.

To drive away rats, use sulphur steeped in water; and if they or worms infest gravel walks, strew the walks over with salt, and then water them.

To DESTROY SNAILS.—Place tiles about the garden in a hollow direction.

They will get under them in the night, and in the morning you may destroy them.

Remove Rose Trees in February, to make them blow late ; or cut some of the buds off, which will answer the same purpose.

To preserve the choice bulbs, cover them over, in severe weather, with old tan, or coal ashes.

When flowers are withering in a flower-pot, plunge about one-third of the stems into boiling water, and by the time the water is cold they will revive ; then cut off the ends and put them into cold water with a little nitre, and they will keep fresh for several days.

Sow all seeds shallow ; and if they are small, such as Poppies, Venus' looking-glass, &c. they should be sown very thin, or the plants will not thrive.

Hoe and sow in the dry, and plant in the wet ; this will generally ensure the crop, and what is planted out will be much more likely to grow.

Shrubs and Flowers should never be planted deep, as they will not thrive so well.

Never put plants in too large pots, as they generally run to roots and stalks, but seldom blow well.

It is a good method to put oyster-shells round the plants in pots in the summer, as they will not require so much water, and will keep the surface cool.

No Plants (but especially tender ones) should be watered when the sun is upon them, as it often turns the leaves yellow, and injures the plants.

Water in the evening from the latter end of May to the latter end of August, and afterwards in the morning, as we often have frosts the beginning of September.

In the winter plunge pots up to the rim in tan or ashes to preserve the plants from the frosts.

Hardy Greenhouse Plants should be kept chiefly in the shade during the summer months, but never under the droppings of trees. Air is of consequence to all plants, so that they should be placed where they can have plenty of it, though not so exposed as to be injured by high winds.

If you wish for Roses at Christmas, select from your Rose Trees such buds as are just ready to blow ; tie a piece of thread round the stalk of each. You must take care not to touch the bud with your hand, or even the stalk any more than you can avoid. Cut it carefully from the tree, with the stalk two or three inches in length. Melt some sealing-wax, and quickly apply it to the end of the stalk. The wax should be only as warm as to be ductile. Form a piece of paper into a cone-like shape, wherein place the Rose ; screw it up carefully, so as to exclude the air from it ; do so by each ; then put them all into a box, and the box into a drawer, all of which is intended to keep them from the air. On Christmas day, or any other day in winter take them out, and cut off the ends of the stalks, place them in a flower-pot with lukewarm water. In two or three hours they will blow as in summer, retaining all their grateful fragrance.

Whenever you want to transplant any Flower Roots in the summer season, make it a rule to do it in the cool of the evening, and give them all a little water ; if this plan is not adopted, the sun will spoil them.

To destroy Earwigs, place the bowls of tobacco pipes on the tops of the flower-sticks, and you will find them in the morning in the bowl ; turn them into a bason of water, and put the bowls on the sticks again.

A SUBSTITUTE FOR BOG EARTH.—Take a quantity of earth from a common about a foot deep with the turf ; mix this with rotten dung, part horse and part cow, with a portion of mould from a hollow tree, and a portion of drift sand ; let these materials be well mixed together, and lay for several months before it is used, turning it once a week or a fortnight.

The best soil for Carnations and Pinks is a large proportion of good rich loam, mixed well with an old melon bed, a little cow dung, and a small portion of drift sand.

Extracted from an useful Treatise on Flowers recently published by J. Wil-latts, Esq. (see review in Cabinet, for 1836.)

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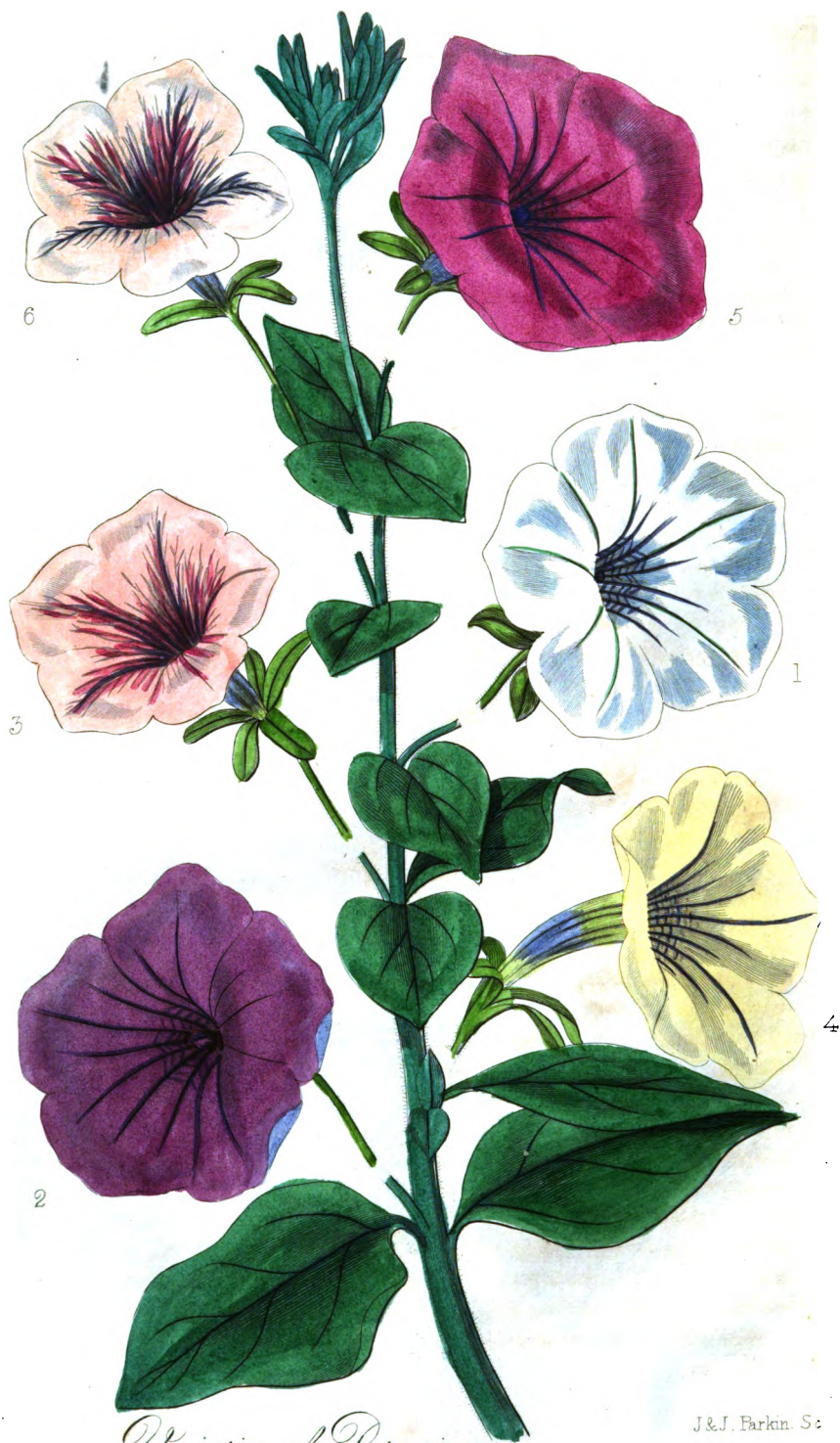


Panpies

Floricultural Cabinet

J & J Perkins

Digitized by Google



Varieties of Petunias.

J.&J. Parkin. Sc.

THE
FLORICULTURAL CABINET,

JUNE 1ST, 1837.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE TREATMENT OF ORCHIDEOUS PLANTS,

BY EPIPHYTES.

I AM glad the subject of the culture of Orchideous Epiphytes has been again taken up in your Magazine, and being much pleased with the communication of "A Three Year's Practitioner," I hope he will take the trouble to enter into a little more detail. In the first place I would ask, does he consider that his plants suffered in the winter when in the vinery, on account of their distance from the glass, or was it not rather in consequence of the dry heat of the flue? It would be well if he would describe somewhat more at length the construction of the house he purposely erected for their reception, as to its height in front and back, and also at the ridge, and whether it stands east or west with a few particulars as to the size of pipes, boiler, and the total area of the heating surface, as a guide to those wishing to erect similar structures. Are we to understand that the pots of plants are only placed upon, and not placed amongst the moss, and that the soil in the pots is not watered, but left to imbibe moisture from it? From the latter part of the paper one would infer that bottom heat was of great advantage in the successful cultivation of these plants, and I should be glad to have your correspondent's thoughts on the subject and whether or not any particular species do better on the ribbed trellis, where, unless moisture is supplied by the pipes being open, they must be exposed to an

ascending current of dry hot air. An account of the mode of ventilation would be acceptable, and as the degree of moisture is a most essential point with the *Ochidee*, any data furnished from observations, made both during the seasons of growth and repose, with either Leslie's (which is decidedly the best and least troublesome in gardening operations) or Daniel's hygrometer would contribute much to their successful treatment. In using the sphagnum is it mixed with the potsherds, or a layer of it placed in the pot? I should fear that the moss on or in which the pots are placed would greatly encourage those pests the onisci or wood-lice, which make such havock of the tender tips of the young roots, but perhaps some mode of remedying the evil has presented itself to the writer, as he does not allude to it at all. Would not sand or ashes be a good substitute for the moss, and afford less shelter to the onisci? Many other matters relative to the management of these plants will naturally suggest themselves to your correspondent, such as the season of re-potting, and the preparation of the plants for undergoing that operation, and by treating the subject more at length, I doubt not he will greatly oblige many of your readers besides.

EPIPHYTE.

ARTICLE II.

A LIST OF THE BEST NEW SORTS OF FLOWER SEEDS, &c. &c.

BY W. C. R.

It being now about the time for sowing or planting out all kinds of flower seeds, I herewith hand you a list of what in my opinion is the best of the new sorts of flower seeds, should you think it worthy insertion, I have no doubt but it will be of some service to amateur floriculturists and persons who are in the habit of buying all the new kinds of flower seeds. All the kinds I have quoted are real good sorts, and every one who grows flowers ought to have them forthwith (if they have not already got them.) All the sorts can be purchased of any respectable town or country nurseryman at from 6d. to 2s. 6d. per packet. Those sorts to which an asterisk is prefixed are either the newest, the dearest, the scarcest, or the best.

Adlumea scandens
Agrostemma coronaria

Amaranthus giganteus
Asclepias nivea

- | | |
|--------------------------------|---|
| * <i>Bartonia aurea</i> | * <i>Ipomopsis pecta</i> |
| <i>Blumenbactia insignis</i> | <i>elegans</i> |
| <i>Calendrina discolor</i> | <i>Jacobæa</i> , new, yellow |
| * <i>disticha</i> | * double white |
| <i>Campanula lorei</i> | * <i>Leptesiphon androsaceus</i> |
| * <i>Catananche bicolor</i> | * <i>densiflorus</i> |
| <i>Catulla aurea</i> | <i>Malope grandiflora</i> |
| <i>coronopifolia</i> | * new <i>alba</i> |
| <i>Chelone diffusa</i> | <i>Nemophila insignis</i> |
| * <i>Clarkia elegans rosea</i> | <i>phaceloides</i> |
| <i>grandiflora</i> | <i>aurita</i> |
| <i>Clintonia elegans</i> | <i>Nolana atriplicitifolia</i> |
| <i>Collinsia bicolor</i> | <i>Phacelia tenacetifolia</i> |
| <i>Coreopsis elegans</i> | * <i>Phlox Drummondii</i> |
| * <i>bicolor</i> | <i>Platystemon californicum</i> |
| <i>Collomea coccinea</i> | <i>Podolepis gracillis alba</i> |
| * <i>Didiscus Cœruleus</i> | * <i>Rhodanthe manglesii</i> |
| <i>Dianthus atrorubens</i> | <i>Sanvitalia procumbens</i> |
| <i>Dolichos purpureus</i> | <i>Scabious</i> , new, mottled |
| * <i>Eutoca viscida</i> | * <i>Schizanthus Grahamii</i> |
| <i>Fumaria spicata</i> | * <i>priestii</i> |
| <i>Gilia tricolor</i> | <i>pinnata humilis</i> |
| new <i>alba</i> | * <i>vensustus</i> |
| <i>Achillæefolia</i> | <i>Streptocarpus rheaii</i> |
| * <i>Godetia rubicunda</i> | <i>Thunbergia alata</i> |
| <i>Heliophila araboides</i> | * <i>Trachymene Cœrulea</i> |
| <i>Humea elegans</i> | <i>Tropœolum tricolor</i> |
| <i>Hunnemania fumarifolia</i> | <i>shillinghi</i> |
| <i>Isotoma acillarlis</i> | <i>Wallflower</i> , new, French striped |
| <i>Iberis coronaria</i> | <i>Zoegea leptæurea</i> |

Some of the sorts as named above are not very new nor are they very old, but they are all considered first rate sorts. There are also a great many new varieties of some of the older flowers, such as *Clarkia*, *Anagallis*, German Aster, Russian Stocks, *Campanula*, *Centaurea*, *Delphinium*, *Franchœa*, *Lobelia*, *Lupinus*, *Nierembergia*, *Penstemon*, *Potentilla*, *Salpiglossus*, *Zimia*, &c. &c. which every amateur which has a good garden ought to have.

April 22d 1837.

W. C. R.

ARTICLE III.

ON A CHEAP AND USEFUL METHOD OF FUMIGATING PLANT-HOUSES. &c.

BY A. YOUNG AMATEUR.

I beg to offer a few remarks on a cheap and useful method of fumigating houses, which I think will prove acceptable to some

of your readers. Some short time ago I was troubled very much with the green fly in my Geranium house, tobacco smoke being a very good thing to destroy them, I was at a loss how to use it, not having any fumigating bellows. However, in a few days, in lieu of this, I hit upon a successful method. I got a flower pot about three inches in diameter, and made a hole in the side of it about an inch from the bottom of the pot. I then filled the bottom of the pot with red hot cinders, upon which I put the tobacco, which of course lighted. To the hole in the side of the pot I applied the nose of a common pair of bellows, which caused the tobacco to burn equally as well, if not better, than with the fumigating bellows. In order to get a good volume of smoke, I make the tobacco quite damp, which the red hot cinders are sure to set on fire. The above experiments I have tried and found to answer exceedingly well.

ARTICLE IV.

ON PROPAGATING THE CAPE HEATHS (ERICAS) FROM SEEDS

BY A FOREMAN OF A LONDON NURSERY.

I AM glad to observe that this very highly interesting genus of plants is again becoming extensively cultivated. I think too upon a more successful system of management than was practised a dozen years back. I herewith forward the mode of management I have pursued, with the greatest success.

PROPAGATING ERICAS.—This very interesting and numerous genus is best cultivated in a house dedicated exclusively for themselves; and where such is the case, such house is known by the appellation of heath-house or heathery, and to be complete should contain from about two hundred and fifty to three hundred species, which will afford a considerable share of bloom throughout the year. Heaths are comparatively of late introduction for we find that in Miller's time, few were known, and those only of the hardy kinds: none of the Cape species being at that time introduced. To His late Majesty George the Third we are considerably indebted for the introduction of this charming genus of plants.

That monarch, at his private expence, sent Mr. Mason, a most assiduous collector, two voyages to Africa, for the almost express purpose, and by his exertions, the first collection of

Ericas in this country was formed. The late venerable Mr. James Lee, in company with Mr. Kennedy, of the Hammer-smith nursery, may be looked upon as the first professional characters who embarked in this speculation, and their collection was looked upon as unrivalled in Europe. These were not only the first commercial collections formed, but there also the mode of culture first devised, which has been the means of disseminating them throughout Europe, chiefly under the management and direction of our late ingenious, although unfortunate friend, Cushing. Subsequent collectors have added considerably to this genus; and although last but not least, that indefatigable young botanist, Bowie, who not only visited Africa with a view to discover new species, but also to draw conclusions from their natural habits, to enable us to improve their culture; and from the observations made by him, and freely communicated to us as well as to others, there is no doubt, that had he survived his second journey, this genus, which hitherto has been considered difficult to propagate and cultivate, would have been much improved by his valued observations. A genus so interesting, and we may say, so long fashionable, must necessarily have attracted the attention of home cultivators; and from the profusion of flowers which most of the species produce, and their parts of generation being for the most part so perfect, we need not be surprised at the many hybrides which the care or curiosity of the cultivator has produced. To the valuable exertions of the Hon. and Rev. W. Herbert, we are primarily indebted for many plants of this description; and from his paper on this subject, in the Transactions of the Horticultural Society, we are led to infer, that this promiscuous impregnation goes on to a considerable extent at the Cape, where millions of them must be in flower at the same time.

Heaths, like most other plants, propagate themselves from seed, although most of them cultivated in this country have hitherto been originated from cuttings; few from layers, and so far as we know, none have been propagated by grafting, or similar processes. A considerable portion of them ripen their seeds with us, and there are annual importations of seeds from the Cape. Those seeds ripened in this country vegetate most readily; whilst those imported are often too old, or sometimes injured, before they reach us. As those imported generally reach us in winter, they should be sown early in spring; indeed some

cultivators advise their being sown immediately after their arrival ; but we have hitherto found, that if sown too soon, that is, in February or the beginning of March that they do not vegetate so quickly, and, in consequence, many of the seeds are rotted : for it is a maxim that should never be lost sight of in the culture of this tribe, which is, that artificial heat should never be employed, excepting in some cases of slow growing kinds, that may require a slight heat to draw the young shoots out to a sufficient length for the purpose of cutting ; but even in this case, they seldom they are so excited, the better.

Artificial heat, therefore, is injurious to the process of originating heaths from seeds ; we, therefore, in our own practice, as well as from observation of that of others, prefer the latter end of March or beginning of April for sowing these seeds ; the natural warmth of the season then is sufficient to stimulate vegetation, and the young tender plants so originated have not the chance of being destroyed by damp cloudy weather, which we often experience in spring, and which would be of the utmost injury to them in their young state. Where extensive collections of plants are kept up, and in all large nurseries, there is generally a seed-house, that is, one expressly dedicated for the rearing of plants from seeds ; such houses are generally low, having a northern aspect, as is the case in the Hammersmith and other nurseries.

Cultivators, who have but few seeds requiring such a structure, content themselves, therefore, with a good garden frame and glasses ; and as such is portable, it can be placed where it is either shaded from the meridian sun, or great care taken in shading it artificially. The situation of such a frame should be both dry and airy, for damp would be extremely injurious to the young plants. Pots should be prepared for the seeds, of ordinary sizes, but those known as seed-pots are to be preferred ; they are broad and shallow, which admits of a considerable surface for the seed to be sown on, and of being rendered perfectly dry at bottom. Great care should be taken in draining them, for although the surface will require to be kept pretty moist, still no impediment must be left whereby the superabundant moisture would be prevented from passing freely off. The directions given for draining cutting-pots will be, if acted upon, sufficient for this purpose. The mould upon which the seeds of heaths are sown, should be of the sort called peat-earth, having naturally a con-

siderable portion of fine white shining sand in it, or, if deficient in this material, it should be added to it by the cultivator.

As the seeds are very small, the mould for this purpose, to the thickness of an inch and a half, should be sifted very fine, and the surface of the mould in the pot rendered smooth and level with a small circular piece of wood, say of three inches diameter, having a nail driven into the centre of its upper surface, by which the operator can use it to much greater advantage. Upon the surface so prepared, the seeds should be thinly sown regularly all over it, and covered with the same kind of mould to the thickness of one-eighth of an inch, more or less, according to the size of the seeds, as some are larger than others. The pots so sown should be then placed upon the platform in the seed-house, or upon a floor (if in frames) of finely-sifted coal-ashes, and after being gently watered with a very fine rose watering-pot, be shaded from the sun. This shading must be continued constantly on during sun-shine, until the plants be from half an inch to an inch high; afterwards it must be gradually removed to harden them by degrees, to fit them for potting off into separate pots. Some cultivators place bell or hand-glasses over the seed-pots when sown, and when such can be spared, they may be with some propriety used. For five or six weeks, the surface of the mould must never be allowed to become dry, but be daily examined, at the end of which time, the seeds may be expected to have vegetated. When such is the case, the bell or hand-glasses should be gradually removed, first by being lifted up about a quarter of an inch, and in increasing this air, until entirely removed. Some seeds of course do not vegetate so soon as others, therefore the pots should be still carefully attended to; but if after three months, or little more, all hope of their vegetating may be given up. Plants, so originated, will be about the middle or end of September in a fit state to plant out into thumb or thimble pots, as they are called, and which are the smallest sizes that are made.

Heaths which ripen their seeds in this country, should be sown as soon as they are ripe, provided this does not occur after the first of September; such as ripen afterwards (and several do so) had better be kept packed up in paper till the following April, when they may be sown as above directed. Plants originated at this time will be sufficiently strong by autumn to pot off; and it is even better then to pot off such as are very small, than allow

them to stand in the seed-pots all winter. It is perhaps not easily accounted for, but plants stand the winter better when potted off in autumn in single pots, than if they were to remain in the seed or cutting-pots all winter; and the same rule holds good in regard to potting off cuttings propagated at any period of the year when quite young, that is, immediately after they have commenced making roots. This is not perhaps generally known, at least it is not always acted upon, as many persons, from an idea that the plants will become strong and better rooted, defer too long the process of potting off, and, in consequence, lose both time and many of their plants. It may, perhaps, not be quite out of place here to observe, that such seedlings or cuttings as have originated in the fine white sand of cultivators, should have their roots completely cleared of it before they are potted in their natural mould; for although most plants emit roots in that sand, it becomes injurious to many of them after they quit their cutting or seed state. Directions for propagating by cuttings have been already amply detailed, to render a recurrence to that process here unnecessary.

We may here however remark, that this family are less annoyed by insects than most other exotic plants, still they are not entirely exempt; for that destroying insect, the green fly of gardeners, sometimes attacks the heath, and as it is found impatient of the usual remedy, tobacco smoke, the best cultivators dip the plant, or parts infected, in a decoction of tobacco liquor. Mildew sometimes attacks the heath; but this, like the cause of its appearance in all other cases, must be owing to damp or stagnation of air. To remedy this evil, has not always been found an easy task; indeed, we recollect, about two years ago, to have seen nearly the whole collection of this family in the nursery of a cultivator, who is allowed to be one of the best in the neighbourhood of London, nearly destroyed by it. Free ventilation and a dry atmosphere seem the basis of a certain cure, and the application of flour of sulphur dusted on the plants, or put on them in form of paste, may be considered as effectual in removing the evil.

ARTICLE V.

ON THE CULTURE OF THE CAMELLIA.

BY CLERICUS.

THE Camellia, is justly esteemed one of the finest, if not actually the finest, of our exotics, and indeed, there are few of the beautiful denizens of the greenhouse and conservatory, that can lay equal claim to our attention. Unlike most of its compeers, this lovely genus, at all seasons, whether it be in blossom or not, excites our admiration. During the summer and early winter months, we are pleased with its bold and elegant form, and with the deep glossy hue of its beautiful foliage; whilst from Christmas to May, the various varieties delight and charm by their fine and showy flowers, of white, buff, striped, and red, of every shade, from the deep crimson to the soft tint of the maiden's blush. The Camellia may in truth be called, "the most beautiful of the beautiful," for what, in the whole range of our exotic flora, is more beautiful than a fine specimen of the Old Double White, having, perhaps, one or two dozens of splendid blossoms fully expanded? or what more delicate than the bloom of *C. sasánqua*, now called *C. maliflora*? The Old Single Red, *C. japonica* appears to have been introduced into England, in the year 1739; and according to Messrs. Chandler and Booth's Camelliæ, the Old Double White was brought to England in 1792, by Sir John Slater, of the East India House, and the Old Double Red, imported in 1794, by Sir Robert Preston, of Vallyfield; since which time many fine varieties have been imported from China, and many fine seedlings have also been raised in this country, within the last few years, more particularly at the Vauxhall Nursery. The names of one hundred and fifty, or one hundred and eighty varieties, might now be collected from the various catalogues of the London nurserymen, but nearly two-thirds are unworthy of notice, and many are mere repetitions of each other.

Stocks, upon which to inarch, graft, or bud, the double sorts, are obtained from cuttings of the Single Red: the cuttings may be taken at any period, after the wood of the present year is ripe. They should be planted in pots of fine white sand, about forty or fifty cuttings to a pot of eight inches in diameter; the pots should be well drained, being nearly half filled with pieces of broken pot. Two or three leaves should be left upon each cutting, at

VOL. v.

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least, no more must be removed than is absolutely necessary to allow of the cuttings being firmly fixed in the sand. After the pots are filled they should be placed in a shady part of the greenhouse for five or six weeks, and then, if convenient, they should be plunged in a gentle hotbed ;—a bark bed will do, but not quite so well. By their, thus, having bottom heat, they will strike root in one half the time they would do, if left in the house. As soon as rooted they should be potted off into small pots, and afterwards kept, if possible, in a hotbed or hothouse, where they will make fine strong wood, and be fit for use in fifteen or eighteen months.

Inarching, or grafting by approach, is generally resorted to for the propagation of the Double Camellias, and not unfrequently, grafting or budding. The former is by far the safest, and may be performed during the summer and autumn, after the ripening of the wood, or early in spring, before the plants begin to grow. The scions may be cut from the parent plants in about eight weeks. There is no necessity to use clay in the operation of inarching, but if independent grafting be resorted to, clay must be used, and the wood must be quite ripe. The method called side-grafting is usually followed, but the tongue, if any, must be very small ; in inarching, care must be taken not to cut the stock or scion too deep. The grafted and budded plants, as soon as the operations of insertion and claying are finished, should be kept under a hand-glass in the greenhouse, or in a cold frame, until the scion or bud has grown for the first time, and not till then, can the heads of the stocks be cut off, without great risk of failure, because an exuberance of sap is thus thrown into the scions or buds, before they are established to receive it without injury,—just as too great a supply of nutriment injures the infant of the human race. Nor should the ligatures or clay be removed before that time, (these and the foregoing remarks are also applicable to the young inarched plants) after which, all the plants should have their tops nipped off, to two or three buds, or they may be removed by inarching or grafting them, if it be wished to increase the stock of the variety ; but unless one of these precautions be followed, the plants will very probably run up with a single stem, and instead of being bushy and pyramidal, will be loose and rambling, and must eventually be cut down. The young plants after being thus decapitated, should be treated if possible, in the same manner as recommended above for the young stocks, viz. to be

kept in a gentle hotbed, or kept in a cool part of the hothouse, they will soon become fine plants; but if any are still inclined to be of a straggling growth, their side-shoots should be shortened. No plant bears the knife better than the Camellia; and here I would recommend to those of your readers who have large and ugly grown plants, to prune them freely, repot them, and then place them in a little heat of some kind; and however old the wood may be which is left, it will soon be covered with young shoots.

The general management of the Camellia, is simple and easy; the chief points are to protect it from the scorching sun, and to prevent its roots from matting round the sides of the pot. Should it be exposed during the spring and summer, to the influence of the sun, the deep dark green of its foliage soon fades, and is followed by a sickly yellow hue, therefore I would recommend, that from the beginning of April to the middle of September, the plants should be wholly shaded from the sun, or at least, exposed only to the early morning sun;—if this recommendation be once followed, it will never afterwards be neglected. However, in recommending that the Camellia should be protected from the sun, I do not advise that it should be deprived of light; yet it is worthy of remark, that even during the winter months, this plant will thrive in the darkest parts of the greenhouse and conservatory, where most others would soon be destroyed. Except, during the growing season, when a liberal supply of water should be given, the Camellia requires to be kept rather dry; but if the roots are allowed to become matted, the water will run down the sides of the pot, and escape at the hole at the bottom, without penetrating the ball of the earth, the roots will be impoverished, and will not imbibe a sufficiency of moisture for the support of the plant, and the first symptoms of this will be the sudden dropping of the leaves and buds, although they appear green and healthy; the death of the patient soon follows, unless the remedy be instantly applied by pruning, repotting, and the application of artificial heat.

“Some cultivators grow the Camellia chiefly in peat. Messrs. Loddiges who have the most numerous collection of the genus, formerly used loam with a little sand and peat, and they are grown in similar soil, in the Hammersmith nursery. Of late Messrs. Loddiges, find light loam alone, to answer as well, if not better. In some establishments, rotten dung is mixed with loam

and peat. Sweet, recommends sandy loam and peat. Henderson of Woodhall, is one of the most successful growers of the Camellia in Scotland; his compost is as follows,—“take one part of light brown mould; one part of river sand, and one half part of rotten leaves; mix them well together.”—(Loudon's “Encyclopædia of Plants,” London 1829.) For my own part I agree with Mr. Sweet, and use about one-third peat, and two-thirds sandy loam. The peat and loam should be turfy, and ought not to be sifted, but chopped together with a spade, and should be rather coarse and lumpy; this will secure a free circulation to the water, and prevent, in some measure, the mischief arising from the matting of the roots. Mr. Sweet, has justly observed, when the mould is sifted, it often bakes as hard as a brick, so that it is impossible for the roots to get through it.

The best time for shifting the Camellia, is during the month of February and the beginning of March; and if it be advisable not to give the plant a larger pot, it should, however, be turned out, and a little of the earth taken from the top, bottom, and sides of the ball, then returned, and the pot filled with a little fresh compost, having first put some broken pot at the bottom. The earth must be removed gently from the ball, with the fingers, not a root taken away, unless it be dead; no cutting and parting the ball with the pruning-knife. In potting, they must always be well drained. A top-dressing, would be of much benefit to the plants, if given at the time of fixing them in their domicils for the winter. The surface should be stirred with some instrument that will not injure the roots, this will keep the earth light, and prevent the moss from collecting.

A little artificial heat, during the growing season, would make the plants push strong and fine shoots; and if they are again put into a little heat in the month of November, it will greatly forward the blossoms, and they will expand finer and better than they might otherwise do; but in no case should the plants be kept in heat, during the flowering season: if so, the flowers will much sooner drop than they would do in the temperature of the greenhouse or conservatory, in which they would continue in full beauty for a considerable time.

The Camellia, like the Orange, but in a much less degree is subject to the scaly bug; the only effectual remedy, is to pick them off one by one with the nail, and rub the parts affected with a little soft soap. The green fly will sometimes attack the young

green wood ; here immediate smoking with tobacco, is the remedy. By frequently syringing the leaves during the summer and washing them with a sponge, two or three times during the winter, the health of the plants will be improved, the attacks of the insects prevented, and the beauty of the foliage shown to more advantage.

I have now, Gentlemen, laid before you the results of my experience in the cultivation of this beautiful genus ; and at the risk of being considered tedious, I have been rather minute ; but in a communication of this kind, elegance and conciseness, should give way to simplicity and clearness of detail.

CLERICUS.

ARTICLE VI.

ON THE PROPAGATION OF BALSAMS BY CUTTINGS.

BY AN AMATEUR GARDENER,

In the month of April, 1831, I received a packet of seeds of the Balsam, from a scientific friend, whose son had produced them in the preceding year, at Madras, and forwarded to his father. the seeds were, to all appearance, most perfect in their texture, and state of maturation ; and I believe, that of all I sowed, scarcely one failed to produce a lively and healthy plant. I sowed the seeds in a pot of light sandy earth ; I plunged this pot in the earth of a melonry, which was a glazed pit, containing a bed of leaves, chiefly oak and beech. The pit was constructed, on three of its sides, of nine-inch brick work ; the fourth, that to the south west, having a glazed sloping light. The bottom heat of the leaves, might be about 80 degrees : but as a stratum of melon earth, full fourteen inches thick, was placed on the leaves, the heat at the bottom of the pot scarcely exceeded 64 degrees.

The young plants rose, were potted out, re-potted, kept near the glass, and finally, kept in the open air, according to the customary routine ; still however they evinced (with one exception only) not the slightest indication of producing blossom, although some had attained the height of three feet or more. At the close of the month of August I became impatient, and as I felt interested in the final result of my exertions, I determined to try how far I might be successful, in an endeavour to extend the period of the growth of my plants into a second year, by attempting to pro-

pagate them by cuttings. My direct object was, as it is stated, to convert one of the members of the plant into a perfect vegetable body, possessed of roots, and capable, under auspicious circumstances, of exerting its various vital functions throughout the winter, and finally, as I hoped, of producing perfect flowers and seeds in the ensuing spring. On referring to my diary, I find, that on the 28th of August 1831, one cutting was placed under a glass, such as a tumbler, or small bell-glass. This cutting was about three inches long; it was taken off at the axilla of a leaf, that is, at the angle formed between the foot-stalk of the leaf and the main, or other principal stem of the plant. The soil in the pot was composed of very light sandy loam and peat earth, and the pot was immersed in the mould of the melonry. This cutting evinced certain signs of the formation of perfect roots; on the 12th of September and on the 18th, four other cuttings were placed in a similar situation; all of them succeeded, and each became covered with blossoms, though it was scarcely four inches in height. On the 12th October the cutting, of August 28th, was eleven inches high; the stem was somewhat slender, and drawn up, owing to the absence of sunlight, but it was furnished with nine perfect semi-double flowers, the ground colour of which was a pale French-white, and this was beautifully striped with a deep pinkish scarlet. When I witnessed the unexpected result of my experiment, I communicated it in a paper addressed to the Horticultural Society, without delay.

It remains only to remark, that balsams may be forced into flower at the close of the autumn:—that the cuttings of the young shoots at the axillæ, or angles of the leaves, of the length of two, three, or four inches, will almost invariably produce rooted, flowering plants, provided they be placed singly, an inch deep, in small pots of rich light earth, and then plunged in a very gentle bottom heat, under glass. These are horticultural facts, which I believe to be decidedly established; and I also consider, that in all probability such plants, if every flower-bud be timely removed, can be preserved during the winter, in a dry stove, or well-aired and warm greenhouse. I am not, however, enabled to speak unhesitatingly on the latter particular, because I was not, prepared to afford the required shelter during November, and the early part of December, as my house was in an unfinished state, and the pit in which the young plants were placed, was far too much exposed to early damps and hoar frosts. I have fully succeeded,

however, in securing a succession of other tender herbaceous and annual plants, by cuttings taken off in September or October; among which I may mention particularly, one of the *Coreopsis tinctoria*: this is now as fine and healthy a young plant as I ever beheld. I only wait for a favourable opportunity of prosecuting my enquiries, in order to furnish that information which may enable other horticulturalists to extend their researches, which, if pursued with patience, and in a spirit of true philosophical investigation, may, at no remote period of time, lead to discoveries as interesting to the lovers of science, as they will be gratifying to those, whose chief object it is to add to or extend the beauties of the greenhouse and flower garden.

ARTICLE VI.

ON THE CULTURE OF DIFFERENT SPECIES OF ROSES.

BY AN AMATEUR

IN the many excellent observations, on the cultivation of the rose which have appeared, I have frequently observed that the rules, though most excellent in themselves, as applied to many species of roses, have usually been too general, and have proceeded on the principle of considering most species as requiring the same modes of treatment, while the great difference in the habits, nature, places and manner of growth, seem to me to point out important variations in the soil, situation, and mode of cultivation required by many of the different species. I therefore would state some of the differences and places of growth, in a wild state, of some of the species, and the variations they seem to suggest in the culture. Though plants are greatly altered by culture yet they generally retain a considerable bias to the soil and situation for which, by nature, they are formed; and it is usually within a certain range only, of what I would call, their natural habits, that they are capable of improvement by cultivation.

In taking a cursory view of the difference, which there appears to me, to be among some of the species of roses, I shall, to make myself better understood, separate the genus into five divisions.

In the first division and place *Rosa*, *spinosissima* and its varieties, the *R. lutea*, *sulphurea*, and *cinnamomea* which, from their slender shoots, small and numerous thorns, and fibrous roots

growing very near the surface of the ground, are all, I believe, plants in their wild state growing upon heaths and places where there is but little depth of soil, and are surrounded only by plants of a low stature; they would seem therefore to require, to be planted in an airy situation, and not to need much depth of soil, as in their natural places of growth; they are exposed to the browsing of cattle, and we find them to bear much cutting and shortening of their shoots.

In the second division, I include the numerous varieties of *Rosa*, provinciális, centifolia, gállica and mucòsa. The varieties of these species are so numerous, that this division contains the greatest number as well as many of the most beautiful roses; they appear to me to be plants which, judging from their manner of growth, have in their natural situations to contend with high grasses, and other strong growing perennial plants; when overpowered by these, they, as it were, remove by sending out roots near the surface of the ground which, when they reach a more airy spot, throw up suckers, these exhaust the old plant, and form a new one in a better situation; the roots of this division, though less fibrous than those of the first, yet are so much so and grow so near the surface of the ground, as not to require either a strong or deep soil.

The third division consists of *Rosa villòsa rubiginòsa*, *moschæta álba*, *damascéna*, and *canina*: the roses of this division have much stronger roots than the others, and strike much deeper into the earth. The place of their growth in their wild state is among large, strong growing shrubs and trees: they therefore require a much stronger and deeper soil, and a less airy situation than the two former divisions, and they do not need, nor bear so much pruning of the shoots.

The fourth division consists of *Rosa arvénis*, *sempervirens* *Ráncsiæ*, and *multiflòra*. These roses, in their natural state, trail along the ground, or support themselves by bushes growing near them, they therefore do not require a very airy situation.

The fifth division consists of *Rosa semperflòrens* and *índica*. The sudden and rapid way in which these roses send forth their shoots immediately on a change of cold to heat, points them out as growing in their wild state on mountains covered with snow a part of the year, and like other natives of such places, with rapidity, taking advantage of an interval of warmth to grow, bloom, and ripen their seed.

AN AMATEUR.

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. CLEMATIS CÆRULEA,
- Violet Clematis*
- . (Bot. Reg. 1955.)

RANUNCULACEÆ. POLYANDRIA POLYGYNIA.

This plant was what we saw in bloom at the splendid collection of Mr. Lowe of Clapton Nursery, and who informed us that its specific name was *Azurea*, under which name we figured it in the Cabinet for last year. The plant, when in bloom, was exhibited at the Horticultural Society meeting in Regent Street, and a Medal was awarded for it. It is a native of Japan. A free grower, and blooms profusely. It is a hardy climbing plant of great beauty and a valuable acquisition.

Mr. Lowe, has recently received another very distinct species from Belgium, called *bicolor*. *Clematis* from *klemu* a tendril, on the leaves.

2. CRATÆGUS COCCINEA,
- Scarlet fruited Hawthorn*
- . [Bot. Reg. 1957]

SYNONYM. C. MACRANTHA.

The fruit of this species is above the middle size, and of a very fine blood colour. The plant is found growing common about New York, in America.

3. CYTISUS ÆOLICUS,
- Æolian Cytisus*
- . [Brit. Flow. Gard.]

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

The plant is a native of the Æolian Isles, found by Professor Gussone, in Stromboli. Seeds of it were sent to this country from the Royal Botanic Garden at Naples. It is sufficiently hardy to bear the climate of this country if trained to a wall. The flowers are of a golden yellow colour, very showy. *Cytisus*, derived from *Cythus* one of the Cyclades, where the *Cytisus* of the ancients (*Medicago arborea*) was originally found.

4. ECHEVERIA RACEMOSA,
- Racemed Echeveria*
- . [Bot. Mag.]

The plant is probably a native of Mexico. It flourishes freely in the greenhouse, blooming profusely in the Summer and Autumn Months. The flowers are produced on a raceme which is nearly one foot long; they are of a deep rosy red colour, a little more than half an inch long. There are five other species, natives of Mexico or California, described by Candolle, and Haworth. *Echeveria* from *Echevera*, a Mexican botanical painter.

5. EPIGEA REPENS VAR. RUBICUNDA. [Brit. Flow. Gard.]

ERECACEÆ. DECANDRIA MONOGYNIA.

This very pretty variety was raised by Mr. John Milne of the Albion Road Nursery, Stoke Newington. It is a very pretty, dwarf, creeping shrub, producing abundance of rich pink coloured flowers, with white tubes. They are produced in small racemes, each having about five flowers upon it. It deserves a place in every flower garden. *Epigea* from *epi* upon, and *gaia* earth, alluding to the stems on the ground.

6. EUTOCA VISCOSA,
- Charming viscous*
- . [Bot. Mag.]

HYDROPHYLLACEÆ. PENTANDRIA MONOGYNIA.

This lovely plant we have formerly noticed, but avail ourselves of another opportunity of recording our testimony of its merit. We have seen beds of it in beautiful bloom at the end of last summer. Its beautiful and brilliant blue blossoms, reminded us very forcibly of the spring

flowered veronica chæmædrys, which adorns our banks, woods and hedges so profusely with a carpet of fine blue. This new species is a native of California, from whence it was sent by Mr. Douglas. The plants grow about a foot high, producing a terminal raceme of fine blue flowers, each flower being near three quarters of an inch across. It deserves a place in every flower garden. *Eutoca* from *eutocus* fruitful, referring to the number of seeds it produces.

7. GALPHIMIA GLAUCA. *Glaucous leaved.*

[Botanist.

MALPIGHIACEÆ. DECANDRIA TRIGYNIA.

This species has been introduced from South America (Mexico we understand) by the Rev. Mr. Keen, of Leatherhead, Surry. It is an ornamental Greenhouse shrub, requiring a support similar to a dwarf climber. The flowers are of a bright yellow colour, each being about three quarters of an inch across, they are produced in terminal racemes. The plant being of easy culture and blooming freely, renders it a desirable plant for the greenhouse. *Galphimia* an anagram of *Malpighia*, a being added for the termination. So named in compliment to *Malpighia*, an Italian physiologist, &c.

REVIEW.

Continued from p. 117.

"From the same cause, such trees attain a great thickness and live to a great age. The new matter being added externally, has little resistance to overcome (only that of a thin bark, which is easily distended and pushed out) and thus there is hardly any limit to its increase in diameter, while, becoming only more securely fixed as it grows, and the growth going on between the bark and the wood almost independent of the inner parts, there is as little limit to the duration of the tree. In fact, each annual layer of alburnum and bark seems to have an independent existence—hence trees are often found flourishing, though quite decayed and hollow within."

HERBACEOUS OR CELLULAR INTEGUMENT. This is the layer of cellular tissue, which lies immediately under the epidermis, and gives to the leaves and young stems their green colour. It forms the substance of the leaf, and in it the changes effected on the sap by the atmosphere takes place.

LIBER, CORTEX, OR BARK. This is found immediately under the herbaceous integument, and consists of a vascular net-work, the spaces between the vessels being filled up by cellular tissue. The bark presents concentric layers, composed chiefly of woody fibre and cellular tissue; and its tissue is easily distended and torn. There is only one layer in young shoots one year old. A new layer of bark is formed in each succeeding year *within the old one*; and thus, in trees, the bark is made up of as many vascular layers as the tree is years old; the older layers being pushed outwards by the growth of the new layers, becoming a lifeless crust, and being often thrown off. Hence the bark may be called *endogenous*, or growing at its inner surface,

"In the newly formed layers of bark, the sap, which has been modified in the leaves by the action of the air, descends to nourish and promote the growth of the plant; hence many of the valuable properties of plants are found in the bark, as in the oak. The outer bark serves the purpose of protecting the new layers of wood and bark from injury, the old and hardened layers forming an excellent protection from external violence."

"The bark, being the part in which the sap descends to supply the plant, is essential for its increase. If part of the bark be removed from a tree all round, so as to leave the wood bare, the part beneath will not grow, the medium by which the nutritious fluids were conveyed to it having been removed, and the tree will ultimately perish. A graft will not take if its bark be not in contact with that of the tree in which it is inserted; and a branch will not take root when surrounded with earth, if the part be deprived of its bark.

THE WOOD. The wood lies immediately under the bark, and makes the

principal bulk of the trunk and branches. It consists of concentric layers or rather cylinders, composed chiefly of vascular tissue. In young shoots, one year old, there is only one layer, which lies upon the medullary sheath. In each succeeding year there is another layer formed. Hence the age of a stem of this kind may be known by counting the number of concentric vascular cylinders in the wood.

"The external woody layers next the bark are called the *alburnum*, and differ from the internal layers or true wood in being younger, softer, more succulent, and of a lighter colour.

"The true wood or heart wood is formed by the inner layers of the *alburnum*, which gradually acquire a greater degree of hardness: the transition from *alburnum* to true wood is, however, almost imperceptible.

"A new layer of *alburnum* is formed annually next the bark: it is pushed inwards, and becomes more compact by the pressure of each succeeding annual layer, till at last it becomes almost solid, the sides of the vessels and cells being squeezed together: hence the greater hardness of such trees in the centre. Thus the wood in such stems is *exogenous*, or growing at its outer surface.

"**MEDULLARY RAYS.** The fasciculi, or bundles of vessels which compose the cylindrical layers, are separated at different points by masses of cellular tissue, extending from the centre or pith towards the circumference, causing an appearance of alternate rays of vessels and cellular tissue. These are called **MEDULLARY RAYS** (from their radiated appearance), medullary prolongations or insertions, or, *the silver grain*. The medullary rays most probably convey the proper juice (the descending sap) from the bark to the interior of the stem.

"The wood gives passage to the sap from the root to the buds and leaves, and contains many of the secretions of the plant. The sap rises chiefly through the *alburnum* (the vessels of which, being young, soft, and not compressed, are well adapted for the passage of fluids), and is conveyed to the leaves, there to undergo changes which render it fit to promote the growth of the plant. Little is known with respect to the particular function of each part of the wood, excepting the *alburnum*, the latest formed layer of which gives passage upwards to the sap. Thus it would seem that the new layer of *alburnum* is formed for the nourishment of the plant, by conveying the sap to the leaves; and this explains why a serious injury of this part is so fatal. When it is destroyed, its office is very imperfectly performed by an old layer filled with secretions, or hardened, and with the vessels contracted by pressure. But a tree may live and flourish with a large piece of the bark and *alburnum* decayed and removed, if not wanting all round. There is an instance of this in a venerable Hawthorn tree near Edinburgh, in which there is a large and deep scar on one side, patched up with stone and lime.

"**THE PITH OR MEDULLA.** The pith is in the centre of the stem, and is contained in the *medullary sheath* or canal, which is composed of vessels, chiefly spiral, disposed in a longitudinal direction. In all plants the pith consists of cellular tissue alone, and is of a light and spongy character. The cells are, in general, very regular, and hexagonal in section: in the young shoots of trees, and in herbaceous plants, these cells are filled with aqueous juices, which disappear as the plant grows older, and then they contain gas alone.

"The pith, it is supposed, nourishes the young wood and the buds during the first year of their existence; and it has been observed that it retains its moisture for a longer period near the terminal bud, and at the parts where branches are given off.

"Such is the structure of the stems of that very large class of plants which constitutes the third division. They are found only in Dicotyledonous plants (plants with two lobes in the seed) as the pea or lupin, and their leaves present in the veins an irregular reticulated appearance. They are called *Exogenous*, because the wood, which is the principal part of them, increases in diameter by the addition of new matter at its external surface. All the trees of this country are *Exogenous*.

To be continued.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE FRITTALARIA.—I shall feel obliged if you will inform me through the medium of the Floricultural Cabinet your treatment of Frittalarias; what soil is best adapted for them? and the proper time for planting, and also the best method for preserving them during the winter

ADOLESCENS.

ON THE FLOWER BUDS OF CAMELLIAS DROPPING OFF, &c.—Will any of the numerous readers of the Floricultural Cabinet inform me the reason of the buds of the Camellia falling off in scales, when they have attained the size of a moderate gooseberry, and an effectual, yet as simple a preventive as possible. I bought a Plant in March (a white variety) with fourteen buds on it, and out of the fourteen, I don't expect more than three or four will expand.

ADOLESCENS.

ANSWERS.

TO PELARGONIUM ON THE DOUBLE ROSE CLARKIA.—The double rose Clarkia is a variety of *Clarkia elegans rosea*, with beautiful double flowers. This is at present rare, it requires care in marking for seed plants, the flowers of which are quite double; the seed I advertised had been saved from plants so selected, which induced me to put FINE after it, and with similar care for a season or two, this fine annual will become a permanent ornament to our flower gardens. It is in my opinion as superior to *Clarkia elegans* as *Pelargonium Dennis's Perfection* is to *Pelargonium Quercifolium*.

Great Russell Street, Covent Garden London.

J. KERNAN.

ON THE CANADIAN POPLAR, &c.—In your last number, page 118 one of your Correspondents, F. S. inquires the proper method and season for propagating the Canadian Poplar—He may safely do so by layering it in March or April, the layers will be fit to plant out in the following November: it may be done by grafting upon the black Italian Poplar, but not with the same certainty of success, nor are the grafted plants so durable, being subject to be overpowered by the shoots from the same stock, unless kept pruned off. To the same inquirer, I beg to suggest he should repot his *Dolichos* now if not already done in a light rich soil, shaking only part of the old ball off, place it in an airy situation in the greenhouse, and when it begins to grow freely, often syringe it with clean water, and there is no doubt of its flowering freely.

On the same page a "Subscriber" inquires the best method of making *Wistonia Sinensis* bloom, I have a plant, which I think has been planted about four years, that grows very vigorously and blooms very abundantly; (I think you saw and admired it much last year, *we saw it, a most beautiful specimen* EDITOR;) It grows in the open garden, has no protection, and in order to make it bloom I twisted it round the stake about nine feet high. I attribute its free flowering to the check it received by being twisted round the stake, just after the same manner as the Major *Convolvulus* twists itself round and round any stick within its reach. If the above remarks are

worthy your notice, and you think they will be acceptable to your very numerous readers, I shall feel glad, as I have received pleasure and profit from the pages of your widely circulated work, I feel myself bound to contribute any hint I can.

W. BARRATT.

St. John's Botanic Gardens, Wakefield.

REMARKS.

LONDON HORTICULTURAL SOCIETY AT THE OFFICES REGENT STREET.

Feb. 7th.—PLANTS EXHIBITED. From Mrs. LAWRENCE, *Bilbergia iridifolia*, *Brucea maculata*, *Oncidium carthaginense*, *Pancratium speciosum*, *Phaius grandifolius*.

Mr. GLENNY, *Epacris campanulata alba*, *E impressa*, *E pungens*, *Camellias Poinsettia pulcherrima*, *Veiltheima viridiflora*.

SOCIETIES' GARDEN, *Echeveria gibbiflora*, *Eutophia lurida*, *Helleborus odoratus*. A communication was read on the cultivation of Cinnamon in England by Mr. W. Buchan, gardener to Lord Bagot. A Banksian medal was awarded to Mr. Buchan for communicating the paper.

A silver Knightian medal was awarded to Mr. Glenny, for his varieties of *Epacris*'s.

Feb. 21st.—PLANTS EXHIBITED. From the Rev. G. C. RASHLEIGH, *Tropæolum brachyceras*, Sir G. Taunton, *Lycum aggregatum*.

Mr. GLENNY, *Azalea indica alba*. *A pontica odorata*. A new white-flowered *Cyclamen*. *Euphorbia splendens*. *Grevillea sulphurea*. *Oncidium bifolium*.

W. BROMLEY, Esq. *Epacris impressa*.

SOCIETIES' GARDEN.—*Azalea indica alba*. *A indica phœnicea*. *Helleborus odoratus*, *oncidium ampliatus*.

A silver Knightian medal was presented to the Rev. G. C. Rashleigh for the *Tropæolum brachyceras*.

March 7th.—Mr. GLENNY. *Andromeda floribunda*, *Correa pulchello*, *Fuchsia microphylla grandiflora*, *Hovea purpurea*, *Phaius grandifolius*, *Styphelia tubiflora*.

Mrs. LAWRENCE, *Ardisia cremulata*, *Brunfelsia americana*, *E campanulata*, *E impressa*, *Dillwynia juniperina*. *Dendrobium pulchellum*, *Gloxinia caulescens*, *Gesneria Douglasii*, *Grevillea arenaria*, *Ipomea Horsfallii*, *Lechenaultia formosa*.

Mr. GAINES of the Battersea nursery, *Rhododendron Russellianum*.

Messrs. LODDIGES, *Dendrobium fimbriatum*. *D. Pierardi*, *D. pulchellum*.

Mr. PRATT, gardener to W. Harrison, Esq. a new species of *Calistemon*.

SOCIETIES' GARDEN, *Azalea indica phœnicea*, *Calistachys ovata*, *Euphorbia Myrsinitis*, *Sisyrinchium grandiflorum*.

MEDALS PRESENTED.—Silver medal to Messrs. Loddiges, silver Knightian medal to Mrs. Lawrence, for *Ipomea Horsfallii*, one to Mr. Gaines for *Rhododendron Russellianum*, to Mr. Pratt for his new *Calistemon*, to Mr. Glenny for his *Andromeda floribunda*.

HORTICULTURAL SOCIETY OF LONDON.—The exhibition for the year 1837, will take place, Saturday, May 13th, June 10th, and Saturday, July 8th.

All persons, whether Fellows of the Society or not, are at liberty to send subjects for exhibition.

Where it shall be required, the Society will defray all fair and reasonable expenses actually incurred in conveying objects to and from the garden, provided a detailed statement of such expenses is delivered at the fruit room in the garden between three or four o'clock, in the afternoon of the day of

exhibition; the statement to be signed by the exhibitor as a declaration of its correctness.

Every exhibitor will be required to sign a printed assurance, that every article exhibited is *bona fide* his own growth.

No subject for exhibition shall be admitted into the garden after half-past nine o'clock in the morning; and if the owners of any locked-up boxes, or other cases already received, should not be in the exhibition tent at the said hour, such cases or boxes must be excluded from competition for the medals.

All specimens whether of fruit or flowers will remain untouched until after six o'clock, when they will be delivered into the hands of the exhibitors, who are requested not to give away their cut flowers in the tents, as much confusion has occasionally been produced by that practice.

Provision will be made by the Society for placing on the table such specimens as may be furnished by the exhibitors; but as some flowers travel most securely when fixed permanently in boxes, and as many persons prefer their own stands, it has been determined that any exhibitors may use their own boxes or stands, under the following conditions:

No box or stand shall exceed eight inches in height at the back, or eighteen inches in depth from front to back. The lids of all boxes must either be loose, or made to unhinge. No box with a fixed lid will, on any pretence, be allowed to stand upon the tables. If a box not constructed of the dimensions above given is sent in, it may be placed on the tables if there is room for it, but it is liable to exclusion,

JUDGES.

The Council being of opinion that, with reference to the Judges and to the manner of making the award, the regulations which have been adopted for the last two years, are upon the whole, the best that can be devised for securing a good and impartial decision, intend that they shall continue to be exactly observed.

Two sets of Judges are appointed by the Council, and from their decision there is no appeal. One set consists of practical gardeners, distinguished both for their knowledge of their profession, and their high characters as independent unbiassed men; the other set consists of amateurs, all or part of whom may be members of the Council. The first set must, in all cases, constitute the majority of Judges.

The judges have the power of increasing or diminishing the number of medals offered by the Society for particular objects, and also of conferring medals in cases not contemplated by these regulations, if they think it desirable to do so.

The only absolute directions which the judges receive from the Council are, firstly, to bear in mind that the Society's medals are offered, not only for new and curious objects, but for remarkable objects of horticultural skill, the design of the Council in instituting these meetings, being not merely to encourage the collector, but rather to reward the success of the skilful gardener; and secondly, not to make any award in cases where the objects exhibited do not appear worthy of a medal, otherwise a bad single exhibition may obtain a prize, merely because there is no better exhibition of the same class to oppose it.

When the objects are arranged upon the table, every exhibition is marked with a letter and a number, which refer to a private list, and every possible precaution is taken to prevent the Judges knowing from whence the exhibitions come. The Judges are introduced into the tents, and the proper officer explains to them the general nature of the exhibitions, confining himself, however, to the mere indication of the parts of the tents in which particular classes of exhibitions are situated, or to matters of a similar nature. The two sets of Judges form their opinions independently of each other. When they have come to separate decisions they quit the tent, and adjourn to the Council room, where they compare notes, and settle to what letter and

numbers the awards shall be made. In cases of difference of opinion the majority decides. When their joint award is finally declared, the names of persons to whom the letters and numbers refer, are, for the first time, announced to the judges, and as speedily after as practicable, to the exhibitors themselves.

SUBJECTS OF EXHIBITION.

These will be divided into two classes; for the first class, nurserymen will compete with nurserymen; and private individuals, with private individuals; and separate prizes will be awarded accordingly; for the second class no distinction will be made between the nurserymen and private individuals.

CLASS I.—Azaleas, hardy, in collection, cut flowers; ditto, greenhouse, in varieties, number not to exceed twelve plants; Carnations, not exceeding 30 blooms; Pinks, ditto; Piccotees, ditto; Cacti, melon-shaped, whether in flower or not. No exhibitor is to show the same plant at more than one meeting during the season, otherwise the award to be void. Heartsease, in stands of 30 varieties; Exotic Orchideæ in collections of six species; ditto for the best single specimens; Pelargoniums, in collections of twelve varieties; Rhododendrons, cut flowers, not less than twenty varieties; ditto in pots not fewer than twelve plants, in twelve varieties; Roses, Chinese and Noisette, in collections of twenty varieties; Roses, Garden, in collections of fifty varieties; ditto, in Miscellaneous collections; Stove, or Greenhouse Plants, in collections of not more than sixty, nor less than twenty plants; Stove or Greenhouse plants, in collections of six single ornamental specimens of different genera.

CLASS II.—Alstromerias, Anemones, Amaryllidaceæ in collections of six specimens; Balsams, in sets of six; Herbaceous Calceolarias, in collections of six pots; Shrubby Calceolarias, in collections of six pots; Cucumbers, in braces, at the May meeting only; no medal will be placed at the disposal of the Judges for June or July; Cacti, the tall kinds in flower; Ericæ, Cape kinds, in collections; Figs, in dishes; Grapes; Melons, single specimens; Pine Apples; Peaches, in dishes of six specimens; Nectarines, ditto; Succulent plants, not before enumerated, in collections of six specimens; single specimens of new or ornamental plants.—The medals for these will be given entirely at the discretion of the Judges; Dahlias; Miscellaneous subjects, not comprehended under any of the foregoing heads.—GARDENER'S GAZETTE.

ON THE LADY BIRD, &c.—A lady whose garden was enclosed by a hedge of rose trees, and which rose trees were covered by swarms of minute insects, saw a hen lead her flock of chickens into the garden; her immediate intention was to have them driven out, but she soon perceived their eyes fixed upon the rose-tree, and watched them till they had satisfied their appetites and perfectly cleared some of the trees.

It is a fact well known that throughout the order of creation every tribe of animated beings is preyed upon by another, and thus, it is supposed, each tribe is kept within the true bounds of space originally prescribed for its existence. The cause of this wonderful dispensation is probably hidden from the power of the human faculty to find out—but the fact remains indubitable; and we see our trees and shrubs apparently preserved from the destructive voyages of these innumerable small flies, known under the denomination of Aphides, by the great variety of species of different orders and to which, in their larva or grub state, they serve as food. Amongst these devourers of the Aphis fly, the beautiful little beetle known commonly under the name of Lady-bird, is pre-eminently serviceable, and in that amusing work “Kirkby's Introduction to Entomology,” it is related that in the year 1807, the shores at Brighton and of all the watering places upon the south coast, were literally covered with them, after having, in the state of grubs devoured thousands and ten thousands of the Aphis which had infested the neighbouring hop-grounds. And the hop-growers are said now to be so sensible of their services, as to place boys to prevent the birds destroying them.

FLORIST'S MANUAL.

BRUGMANSIA AUREA, &c.—On visiting the gardens of Mr. Barratt of Wakefield, we were very much pleased to find plants about two feet high in bloom of the true yellow flower seed *Pomagamansia* (see Advertisement in this month's Cabinet). The flower is about the size of the *B. sanguinea*, but of fine rich golden yellow colour. There is an inferior kind in the country, the flowers of which are of a dull buff colour, and which has been sold out for the true *B. aurea*; this has led to the denial (by many persons) of their being a real golden yellow kind. The true one is a very desirable plant for any cultivation. We also saw in fine bloom, a plant, two feet high of the *Epacris paludosa*; it has generally been considered a shy bloomer, but the plant we saw, was in profuse bloom. The flowers of the *paludosa*, we observed were produced in cymose clusters at the extremities of the lateral branches, whereas all other kinds we have seen in bloom, produce the flowers along the branches, they are of a pure white, and produce a very pretty appearance.

FUCHSIA GROOMIANA was in full bloom, and is a valuable acquisition to this pretty tribe of plants. There was a fine collection of *Ericas* in bloom, some of the new species being very handsome.

SOIL PROPER FOR PINK PIPINGS.—Take one barrowful of light rich mould, add to it half of one of light loam, with half of one of drift sand. When you plant the *Pipings*, sprinkle some water over them, and in an hour afterwards put the hand glass over them, which must remain on till they are struck, shading them from the mid-day sun. They must always be watered over the glass with the rose on, so that the water should go entirely round the glass. When the sun is off take the mat away, as they should have plenty of light.

ON MIMOSA SENSITIVA.—A correspondent at page 108 Vol. 4, wishes to know how to raise the *sensitiva* Plant (*mimosa sensitiva*) the best method he can adopt is to sow the seeds in the latter end of March in 48 size pots, and when the seeds is up and showing the second leaf, they may be potted off.

ON PLACING GREENHOUSE PLANTS IN THE OPEN AIR DURING SUMMER.—When the pots are exposed to the heat of the sun, and drying winds, the fibrous roots which are in quantity about the roots, are much injured by it, although the interior of the ball of earth be in a moist condition. The result of the pots being so exposed during summer, is soon apparent by the edges of the leaves turning brown, or many of the leaves becoming wholly so. The plan I have adopted for four years has been the following, the plants have grown freely and been of a fine healthy green, blooming profusely. I made a bed of sifted gravel six inches deep, choosing the gravel that was about the size of horse-beans. This admitted the wet to draw away, at the substratum I had a few inches of coal ashes to prevent worms coming through. The surface being levelled, I placed the pots and filled up the spaces between with moss, nearly to the rims of the pots. This method kept them cool but not wet. If this be inserted in the May Number of the Cabinet, it may be of service to some of those persons who turn out plants during summer. CLERICUS.

ON HERACLEUM ASPERUM.—I am much interested in a plant, which although possessing no beauty of flower, is distinguished by its size and stately appearance; *Heracleum asperum*, the Siberian cow parsnip, which in the open border, under favourable circumstances, will attain a height of ten feet, with leaves four to five feet long. It is a biennial, and should be sown where it is intended to stand, in a rich soil. When it shoots up the second year, it may be watered with liquid manure and warm water, which will greatly promote its rapid and vigorous growth. W. C. J.



THE FLORICULTURAL CABINET,

JULY 1st, 1837.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON STRIKING THE VERBENA MELINDRES.

BY A. D.

I BEG to suggest, if you think it worth your attention a plan for striking the runners of the Verbena Melindres, which I have found more successful than any other. When the plants are put out in beds, sink in all directions at about a foot distant, and in all pots (say 60.^s) filled with earth; as the plants increase over the bed, place a joint over each pot, confining it down by a peg or stone, and let them remain till you are apprehensive of frost; then divide at any length you like, the runner from the parent plant; take up the pots containing a strong well-established plant, and sink the pots again in baskets or boxes of mould, placing them in a cold frame or greenhouse. They will be fine plants for the next spring, and flower immediately on being put out; whereas cuttings or runners removed from the bed are often sickly and difficult to keep through the winter.

I have no doubt many other trailing plants would propagate well in the same way, but I have little opportunity of trying experiments, and a very thankless garden soil to work in; nevertheless, I am fond of all common gardening, and have found your little Cabinet very useful.

Respectfully yours,

A. D.

ARTICLE II.

ON THE HISTORY AND CULTURE OF THE TREE PÆONY.

BY AN ARDENT AMATEUR.

PÆONY belongs to Polyandria, Digynia Lena: Ranunculaceæ. Nat. Ord. *P. officinalis*, has been in this country ever since 1562. It is a native of Switzerland. *P. cosallina* is a native of this country, but the only place where to my knowledge it is found coiled, is the Flat Holmes, a rocky island in the Bristol Channel, which by the bye, is noticed for its natural production. Pliny mentions, the Pæony as one of the first known plants, that it was called after Pæon, a physician who is mentioned by Homer in his Iliad, 5th book, 900th line, when Mars had been wounded:

“ Thus he who shakes Olympus with his nod,
 “ Then give to Pæon's care the bleeding god
 “ With gentle hand the balm he pour'd around,
 “ And heal'd the immortal flesh, and clos'd the wound.”

Pliny also says that it was called Pentoboran, and Glycisides by some, but the name seems to have been dropped. Montan is a Chinese word for this particular variety of Pæony, which was introduced by Sir Joseph Banks, from China, in 1794. Although he introduced it first to me, it had been known by hear-say for a long time, its beauty extolled, its magnificence exaggerated: £100 at first was thought a fair price, and in China, plants of the choice sorts were sold at a high price. It is a most magnificent plant and valuable; as with the protection of a wall or hedge near the ground with wicker work, it will flower in April, May, and June, and stands our winters. The difficulty of propagating it with success occasions it to be sold at a high price. *P. papaveracea* generally costs from 15s. to 20s. the single plant: to those who are desirous of propagating this handsome plant, I recommend the following operation, all of which I have tried and very generally with success.

When the Pæonies are budding, that is to say about February, a ring of bark about one-sixteenth of an inch wide should be cut out all round the stem, above and below each bud in the stem or stems of the plant to be operated upon: the sap being obstructed in this manner, lay the branches, leaving the leading shoot at the end only above the ground. Five or six months after,

the buds will be seen to have made vigorous shoots, the earth may then be removed and each bud with its fibres separated from the main layer, by taking the shoot off with half the stem attached to it, the whole length of the stem being still entire it may be replaced in the earth again, and a fresh set of young shoots more plentiful than the first may be expected.

I have also tried grafting with success, the operation is the same as with Dahlias, namely, a portion of the stem is inserted into one of the tubers of the same or any other variety of Pæony.

Cuttings would also strike in light rich soil in the shade without cover; but I have never been very successful in that mode of propagating this plant; but if they are inserted into the soil about three inches below the surface, and plunged into a light hot-bed, they will soon shew themselves above the ground, and make fine plants, but it is always a practice with me to plant only one half of the stem, and placing it longitudinally. By these various ways this beautiful plant may be propagated abundantly, and will most likely be the means of lessening the expence which at present must prevent many from possessing it.

AN ARDENT AMATEUR.

ARTICLE III.

ON THE CULTURE, AND A LIST OF HERBACEOUS PLANTS WHICH WILL THRIVE IN THE AIR, AND SMOKE OF CITIES.

BY WM. BOYCE.

No person having given the information desired by "A would be Suburban Gardener" (Vol. viii. p. 721) I now attempt to do so and although I regret that the subject has not fallen into abler hands, still, I hope the motive, and not the value of the offering, may propitiate its acceptance. The two principal causes of the want of success attending the cultivation of plants in town gardens are, the want of a proper soil, and a congenial air: the former is generally composed of too much lime and brick rubbish, which is any-thing but good for showy herbaceous plants. I would first ascertain if such were the nature of the soil. Should it prove to be of those materials, take it out of the clumps and borders to the depth of a foot, and fill them up with fresh loam, mixed with a

little rotten cow manure : in this soil will grow all the plants named in the accompanying list.

I shall endeavour now to assist this Suburban Gardener in rendering the air which surrounds his plant department more healthful to them. Dr. Hunter observes, that air contains the life of vegetables as well as animals : " it is a compressible elastic fluid." The smoke of populous towns and cities, where coal is the fuel, greatly lessens it elasticity and fluidity, and consequently renders it incongenial to plants. The practice observed by town gardeners in general is to give an abundance of water to the roots of plants : this should be discontinued, or, at least, given much more sparingly and less frequently : it is by over watering, in such gardens, that plants are as it were, surcharged with crude juices, which the leaves, while they are covered with dust, cannot pass off. I would, therefore, instead of watering so much to their roots, give frequent syringing over stems and leaves, and keep them as free from dirt as possible. They will then be able to perform their proper functions, perspire during the day, and during the night fill themselves with fresh juices. Cleanliness is as necessary to plants as to animals. The syringing should be performed at the approach of evening in the summer months, and just before sun-rise in early spring and autumn. Keep the mould in the clump and borders loose, by frequent stirring with a dutch hoe; water with a fine rose any vacant compartment. By this, and the syringing, the air will be rendered more humid. The China Rose may be induced to grow two feet high, by giving it, in addition to the soil I have mentioned, a good supply of rich manure, and keeping its leaves clean. The Fuchsias, particularly *Fuchsia gracilis*, should be kept to one principal stem; the side should be shortened to an inch of the stem: they then flower more freely. A Suburban Gardener will do well to examine whether his Georginas (Dahlias) are not infested with earwigs : if they are, hang a few lobsters claws on the sticks they are tied to; in these they may be caught; if he has a bloom he particularly values, tie loosely tow, dipped in sweet oil, just below the flower bud.

In the list below, I have confined myself to herbaceous plants, such as are showy, and will with the treatment I have described, not only grow, but thrive in town gardens.

<i>Achillia rosea</i>	<i>Campanula sarmatica</i>
<i>Aconitum ochroleucum</i>	<i>Catanauche cœrulea</i>
..... <i>variegatum</i>	..... <i>alba</i>
..... <i>versicolor</i>	<i>Chelom glabra</i>
<i>Actœa spicata</i>	.... <i>obliqua</i>
<i>Adonis vernalis</i>	.... <i>lyoni</i>
<i>Allium Moly</i>	<i>Corupsis verticillata</i>
<i>Anchusa italica</i>	..... <i>senifolia</i>
<i>Antirrhinum majus bicolor</i>	..... <i>lauceslata</i>
<i>Aquilegia sibirica</i>	<i>Coronilla iberica</i>
..... <i>glandulosa</i>	..... <i>montana</i>
..... <i>atropurpurea</i>	<i>Corydalis nobilis</i>
..... <i>hybrida</i>	<i>Delphinium grandiflorum</i>
<i>Asclepias</i>	..... <i>mesolencum</i>
..... <i>pulchra</i>	..... <i>Barlowii</i>
..... <i>purpurascens</i>	<i>Dianthus latifolius</i>
<i>Asphodelus</i>	..... <i>japonicus</i>
..... <i>ramosus</i>	..... <i>superbus</i>
<i>Aster</i>	<i>Dictamnus fraxinella</i>
.... <i>alpinus</i>	..... <i>albus</i>
.... <i>armellus</i>	<i>Digitalis micrantha</i>
.... <i>nova angliae ruber</i>	.... <i>lanata</i>
.... <i>sibiricus</i>	<i>Dodecatheon meadia</i>
.... <i>mutabilis</i>	..... <i>albiflora</i>
.... <i>spectabilis</i>	... .... <i>gigantra</i>
.... <i>serotinus</i>	..... <i>elegans</i>
.... <i>pulcherrimus</i>	<i>Dracociphalum speciosum</i>
<i>Baptisia exaltata</i>	..... <i>variegatum</i>
..... <i>australis</i>	..... <i>altaense</i>
..... <i>tinctoria</i>	<i>Eranthis hyemalis</i>
<i>Betonica grandiflora</i>	<i>Erigeron philadelphicus</i>
<i>Campanula carpathica</i>	..... <i>glabellus</i>
..... <i>persicæfolio cœrulea alba</i>	<i>Erythronium deus cauis</i>
..... <i>Letifolia cœrulea alba</i>	..... <i>deus cauis album</i>
..... <i>trachelium bicolor</i>	..... <i>americanum</i>
..... <i>speciosa</i>	<i>Fritallaria imperialis</i>
..... <i>azurea</i>	<i>Galanthus nivalis</i>
..... <i>alliariaefolia</i>	<i>Gaillardia aristata</i>
	<i>Gentiana asclepiado</i>
	..... <i>cruciata</i>

<i>Gentiana acaulis</i>	<i>Helenium autumnal</i>
<i>Geum coccinum majus</i>	<i>Helianthus decapitalus</i>
<i>Gladialus lyzantinus</i>	<i>Heleborus niger</i>
..... communis	<i>Hemerocallis graminea</i>
<i>Glaucium fulocum</i>	..... disticha
<i>Hedysarum observum</i>	..... fulva

I shall send you the remainder of the list at a future time, there being a great many more names. You may insert this or not, as you please.

ARTICLE VI.

ON RAISING SEEDLING DAHLIAS.

BY MR. D. PEARCE.

As several of your correspondents appear anxious to acquire a little knowledge on raising seedling Dahlias, I beg the insertion of the following:

All the new and splendid varieties which now make so great show in our gardens, have been raised from seed. To insure success to the cultivator, the following remarks may be found advantageous:

IMPREGNATION.—Artificial impregnation is certainly an advantage, and, if properly performed, will seldom fail to answer the intended purpose.

Select as handsome and compact flowering plants for the parents as possible. Having done so with a small pointed camel's hair pencil, take the pollen dust from one flower to another. The design of this, however, would in a great measure be frustrated, if bees were not prevented having access to the flowers. To prevent any disappointment from bees, cover the flowers intended to be the female parent, with a fine gauze bag, for two or three days before the florets expand.

As soon as the florets open, impregnate them, but retain the gauze bag over them for another week, until all danger from impregnation of bees are over. In collecting the seed in autumn most cultivators collect from the outside tiers alone, because they they were usually much finer and better ripened. These outside tiers, however, are probably inferior to the inside, for producing the greatest quantity of double flowers, the very finest

seeds usually producing the greatest quantity of single flowers, therefore it is advisable to collect both inside and outside tiers.

SOWING THE SEED.—February is the best time for sowing the seeds fill some pots or boxes with light sandy loam and leaf mould, or leaf mould alone, and thinly scatter the seeds, lightly cover them with the same soil finely rubbed through the hands upon them, and place the pots in a gentle hot-bed, or other convenient place where the seeds will receive warmth, and they will shortly be up.

As soon as they come into rough leaf, which will be about the end of March, transplant them two inches apart, into other pots or boxes filled with the same compost in which they are sown. About the middle of April they will require again transplanting.

In transplanting this second time, either place them in single pots filled with good rich loam, leaf mould, and rotten dung, or place them in a gentle hot-bed, in the same kind of soil. The former way is the best, although attended with most trouble, because the plants can remain in the pots until turned out entire into the borders, when all danger of frost is over. Keep them still in a gentle heat, and gradually expose them to the open air till they will bear it regularly in the day, but take them in when there is the least danger of frost at night.

When all danger of frost is over, they may be turned out with good balls into the situations where they are intended to flower.

SOIL.—They will grow well in any good garden soil, but if it be a good strong rich loam, they will flower earlier and better; also the colours will be more brilliant.

MANURE.—Much dung, however, must not be introduced into light soils for them, or they will make a great quantity of branches, and probably not flower till late in the year, when the frosts are just commencing. But if the soil be suitable, they will flower about the end of July.

And now, perhaps, some one or other of your correspondents will be kind enough to answer my query.

A friend of mine lately gave me a flower which he had received in a nosegay, and on enquiring of Flallagan & Co. opposite the Mansion House, was informed it was an *Hibiscus*. The colour of it was a beautiful kind of nankeen, with a beautiful scarlet at the

bottom of the petals, and the flower about the size of a Daffodil. I wish to know the soil, treatment, and method of propagating.

Yours, &c. D. PEARCE.

P. S. I have planted a slip about five inches long, that was joined to the flower in a thumb pot, in sandy loam, and placed in a slight hot bed, it has been planted a week, and looks fresh at present.

ARTICLE V.

ON DELPHINUM GRANDIFLORA.

BY LARKSPUR.

A CONSTANT reader of your pleasing Cabinet feel somewhat surprised in never seeing any remarks made of that beautiful flower *Delphinium Grandiflora*, or the great flowered Siberian Larkspur. Two years ago come summer, I was at Coldingham, and in Mr. Martin's nursery, where I saw a large square of that splendid blue flower, in full bloom; there might be a thousand plants, they grew from two to three feet high, upon a low, wet, and inclined to be a piece of boggy ground, where he propagates a great quantity every year. I purchased of him twelve plants, at 6d each, took them home with me, with a ball of earth to each, and planted them upon a rich vine border; they continued flowering that summer and autumn. The year following they grew to the height of six feet, they flowered all the way up the stalk, and was very gay; when the blooming was over I cut them down; they again rose and flowered, and was splendid in the autumn; rich light soil suites them best. Should you consider this worth your notice, I may in future do better.

LARKSPUR.

ARTICLE VI.

ON PELARGONIUMS.

BY GERANIA.

BEING a devoted admirer and cultivator of flowers, and residing in a remote part of the country where I have no opportunity of seeing the variety of new and beautiful plants, which are every

year introduced to those florists who are more fortunately situated. I rely upon the pages and illustrations of your valuable publication for information upon the subject, and more particularly for guidance in the choice of Pelargoniums, with which, to enrich my collection; it was with the utmost satisfaction I perused the list given of them in the twenty-eighth number of the Floricultural Cabinet, by a correspondent, in answer to the enquiries of a Lady. It would confer a favour upon me Sir, and to my knowledge, also upon several others who take your work regularly, if you, or the same obliging person who sent the select list, would give one of the most choice Pelargoniums raised, or in the hands of the trade since June, 1835, to comprize names of the plants, by whom they were raised, where, and at what price they are to be bought in April next, with such description of the colours, &c. of the flowers, as will prevent mistakes, where, as in the case with Pelargonium called "*Queen Adelaide*." THREE flowers are known by the same name. If you could also give a print of three or more Geraniums, grouped in the same way in which the Chinese Chrysanthemums are so prettily shewn in number thirty-five of the *Floricultural Cabinet*, you would confer an obligation upon me, and many others who I have no doubt would be equally willing to pay double price for a number so illustrated.

Trusting you will take my request into your consideration, and grant them as speedily as your arrangements permit.

GERANIA.

ARTICLE VII.

A LIST AND DESCRIPTION OF CARNATIONS.

BY PENSEE.

Continued from p. 111.

BROOK'S FLORA'S GARLAND (*pink flake*.)

This, perhaps, is the best of the many this successful grower has been the fortunate raiser of. For shape it commands the same place among Carnations as Springfield Rival in Dahlias. Nature requiring but little assistance from the most skillful dresser to set it off. The colour is also very good, the pink and white being very regularly and nearly equally divided. It has at length found a place in Hogg's Catalogue, and from thence will, I have no doubt into most collections.

VOL. V.

B

STONE'S VENUS, P. P. B.

Found in the catalogues under the head of pink and purple bazarres, occasionally looses its pink, and settles down into a flake: in each character I have seen it shewn in the same pan, in both it commands a first rate place as a bazarre, it is certainly most to be valued, there being so few pink and purples worthy of notice, or that can boast of both colours so distinctly marked as in the Venus. It has been out now many years, yet being difficult to strike, is still scarce, and fetches a high price, 15s. the pair, being very generally demanded.

YOUNG'S EARL GREY, C. B.

With this flower in a collection, the grower may be pretty certain of being able in due season to cut a good crimson bazarre. I do not know a flower on which greater dependence can be placed; I have now grown it for several seasons, and have invariably shewn it with success; a better, but certainly, not a more useful flower can be grown.

MARTIN'S PRESIDENT, P. F.

I do not think I can recommend a better purple flake to notice than Martin's President. I have bloomed it for five or six seasons, and it has never failed to produce me good show-flowers. I must allow I have occasionally seen blooms of other sorts superior, but I believe, as much dependence is to be placed on this as any flower extant, its fault is that of sometimes throwing the bloom high above the calyx, so that unless great care is taken in dressing (particularly if the flower is a little stale) it will not bear the removal of the artificial support, occasionally dropping a guard leaf after being placed for exhibition.

WILMER'S CONQUERING HERO, S. B.

Were it possible to combine the merits of two flowers, I should only desire to rob Fletcher's Duke of Devonshire of its brilliancy in favour of this; and the Conquering Hero would be the best scarlet bazarre ever raised, it can boast of every good property in a flower, save being a little dull in colour, but yet so trifling is this defect, that is hardly perceptible except in close contact with such a flower as the Duke of Devonshire. It is very large, distinctly bazarred, and rose-leaved.—The next flower I shall call attention to is

HUFTON'S MAGNIFICENT, S. F.

Which is in my opinion "and others whose judgment cry in the top of mine," an excellent flower. I saw it for the first time last year, but not having bloomed it myself, cannot describe its habit; I can only say that if it was the most uncertain flower ever raised, it should still have a place in my collection to be cherished with the hope of producing one bloom as good as it was shewn me last season.

WOOD'S WILLIAM FOURTH, C. B.

I don't know either Carnation or Piccotees that bears this grower's name but may be admitted into the most select collection; but as I shall have occasion to make honourable mention of Wood's name in my list of Piccotees, I shall at present content myself by hoping he may have a continuance of the success which has attended his labours hitherto, and that he has yet to produce for the benefit of brother florists many such as that prince of Piccotees "Agrippina." William IV. is a good bazarre, much resembling Earl Grey, but, perhaps, a little more brilliant in colour, though I think, not quite so perfect in shape.

DALTON'S LANCASHIRE LASS S. F.

As I bloomed this flower for the first time last year and received my plants late, I should, perhaps, by describing my blooms, which were small, and thin of leaves, condemn a flower which I am given to understand deserves to be well spoken of. I received it with a good character from a very good judge, and as my plants are looking well this season, I shall abstain from passing an opinion until after another blooming season, when I can do so with more satisfaction to myself and justice to the flowers.

BROOK'S GLORIA FLORUM, S. B.

Is a very large flower, much cultivated in the west of England, it is by no means equal to Willmer's Conquering Hero, the defects in that flower being multiplied in this: in addition to the dullness of its colour, the white is far from good. Those florists who esteem size the best of all properties, will consider the flower a great addition in their collection.

JACQUES GEORGEANA, C. B.

From being a late bloomer, is seldom seen exhibited, and therefore but little known. It is one of the very highest coloured flowers, beautifully bazarred, and possesses a property seldom found amongst such, of rarely running in colour: the difficulty of producing it in season is to be regretted, as it would be a fine variety in a stand; but being at least a fortnight later than the generality of Carnations, is in perfection only when others are fading.

I have now spoken of some of the varieties of Carnations, but propose returning to the subject in some future paper if found interesting to your readers. I hope in your next Number to commence my list of Piccotees, a flower which has made most rapid strides within the last few years, and from the quantity of seed saved in 1836, a season or two will, I expect, produce some splendid varieties.

PENSEE.

ARTICLE VIII.

A DESCRIPTION, &c. OF BINS FOR HOLDING SOILS, &c.

BY AN OLD SUBSCRIBER.

THE enclosed is very much at your service, and should you consider it of sufficient general interest, I shall be glad to see it inserted in the Cabinet. I am of opinion that it is one of the many conveniences still required for the purpose of facilitating the routine business of gardening:

Fig. 1. In the plan, is a section endwise a set of Bins for holding soils, manures, and composts.

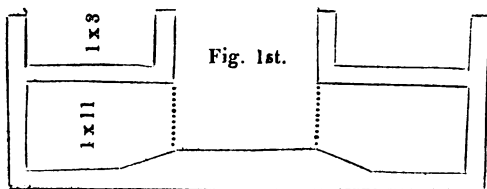


Fig. 2. A ground plan of the low tier of Bins.

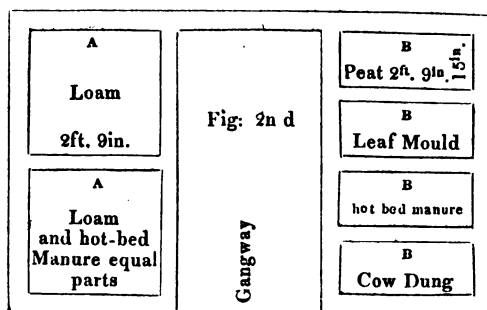
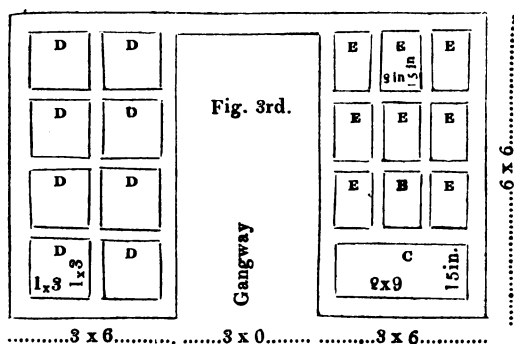


Fig. 3. A plan of the top or upper tier of Bins.



The capacity of the different Bins is such as may be required for the use of amateur gardeners, but the dimensions and number may be increased so as to suit the purpose of any cultivators of plants, however large the establishment.

The object of this plan is to enable any person to arrange his materials for propagating plants in something like order, and in the least possible space (it is an excellent rule to have a place for every thing, and every thing in its place, it saves a world of trouble.) It is also an advantage to have such small quantities in compact masses, when once moistened they keep so for some

time, and this state is essential to the perfect decomposition and commixture of the materials forming the compost. The Bins being open, are fully exposed to all changes of temperature, but the whole set should be covered with a light roof to protect them from excessive wet, and shade them from the heat of the sun.

The bottom of the lower tier of Bins, is six inches below the surface of the ground, or level of the passage or gangway, (which should be a paved one) this is to prevent the draining into the gangway of a superfluous mixture from the soils kept in the Bins. The whole may be surrounded with an ornamental bank, hedge, &c.

The 2 Bins marked A	hold 8 bushels each	} Fig. 2.
The 4 do. B	.. 4	
The 1 do. C	... 3	} do. 3.
The 8 do. D	.. 1½	
The 9 do. E	.. 1	

The most economical and also very durable construction would be that of bricks set in Roman cement in the partition walls or their edges. The bottoms of the Bins in the upper tier should be of stone, each Bin should be labelled (three inches by one broad) with white paint, and upon this may be written with a black lead pencil (B N) the name of the compost. The following is a list of the size and number of pots which a bushel of compost will fill. The utility of this list consists in enabling a person to mix as much of any one kind of compost as will be required to fill a given number of pots, so that there will not be any waste of materials, which in situations where they are scarce, will be of no slight importance.

A bushel fills 160 small 60s 80 large 60s 60 small 48s 40 large 48s
26 small 32s 20 large 32s 14 small 24s 10 large 24s

I have been at some trouble in collecting for my own use, (principally from the pages of the Cabinet) a number of formula for preparing composts, they are arranged in a tabular form, which I find exceedingly convenient for reference. Will the list be acceptable? (Yes CONDUCTOR) if so, I will send it. I really think it would be very useful to the readers of the Cabinet. I think gardeners need not be under any apprehension of making amateurs too wise, for very few indeed will aim at more than

cultivating plants, and the very circumstance of being able to do so, will induce many to become purchasers, and afterwards excellent customers to Nurserymen and Florists. This has been exactly my case, and entirely in consequence of taking in the Cabinet. Your own exertion and that of others engaged in similar publications will bid fair to turn the whole country into a flower garden, and will also have a vast influence in a moral point of view. Gardening generally induces a stimulus to industry and cleanliness, and no doubt soften the manners of the labouring class of persons.

Pimlico, London.

AN OLD SUBSCRIBER.

ARTICLE IX

ON THE GRAFTING OF THE ROSE.

BY POMONA

THE cultivation of the Rose has long been considered worthy of the notice of the lovers of Flora, and not only by those who are in exalted stations of life, but even by the humbler classes; it is an ornamental shrub of great beauty, and the brilliancy of its colour, and the fragrance of its smell, is justly admired by all. Having seen an article in the last month's Number of your valuable work the Floricultural Cabinet, on the "Culture of the Rose," perhaps it may be gratifying to some of your readers to learn the method which I have pursued in grafting that fragrant flower.

In the first place it is requisite that you should secure a supply of buds before the time they are wanted, either by having the plants from which they are to be taken in your own garden, or from a nurseryman on which you can rely; if, however, you cannot obtain any by these means, nothing remains but to buy a few plants for the purpose. If the plants to give the buds be on their own natural roots, see that they are planted as soon as they have lost their leaves in autumn, in order that they may get well settled before the spring, but if you wish to secure a good supply of buds, purchase a strong stemmed standard Rose or two: see that they have plenty of wood, and are in health, taking care to remove any leaves on the trees previous to planting.

The next thing to be looked after, is to secure good stocks,

November being the best month calculated for that purpose. When your preparations are made, nothing more is necessary than to send to the nearest wood-man and desire him to make a collection for you, either from the woods, or save you a supply when he grubs up a hedge.

The largest stocks are those which have an oval fruit, they are called, indiscriminately, dog roses, buckbriars, and hangberries. Different roses want different stocks. A tree that of itself would make a yard of wood in a season, is confined and injured in its operations, by having, perhaps, a single bud upon it of some rare and delicate kind of rose, which makes but feeble and delicate shoots. Again, if a free growing bud, such as the Noisette, Greville, &c. were put upon a small stock, the bud would entirely drink up the sap of the stock, and instead of a fine bushy head, would either grow in one long shoot, or, at all events, make a small and mean head, in comparison to what it would have done upon a larger stem. Choose, therefore, about a third more stocks than you absolutely want, and let the others be laid in the ground as a reserve, you will find them serviceable at some future period.

The stocks are to be kept a short time out of the ground, as the air injures the root. This is very important, as the expected shoot depend upon it: but if they have been weakened by lying out of the ground, they regain a portion of their strength by being much shortened in the stem, for the roots of all trees are proportioned to the stem they have to maintain, it is therefore evident that an injury to the one must also injure the other.

If you are desirous to keep your stocks some time before planting, they must, like all other trees, have their roots covered with mould, otherwise it will retard the future growth of the plant. When stocks are sent any distance, a puddle of clay and water should be made, and the stocks dipped in it, so as to form a coating to defend them from the wind; and then, being packed up in an old bas mat, they will carry without injury.

The trimming of the stocks ought to be carefully attended to, both as regards the mode and requisite height. Four feet, three feet, two feet six inches, two feet, one foot six inches, and one foot, are the heights most likely to succeed. Should any of your numerous readers derive any benefit from the above sketch, it will give great pleasure to

POMONA.

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. GARDENIA PANNEA,
- Cloth-leaved*
- . [Bot. Reg. 1952.]

CINCHONACEÆ, GARDENIEÆ. PENTANDRIA MONOGYNIA.

The plant was introduced a few years back to the London Horticultural Societies Garden; it is a stove shrub from South America. The flowers are single, two inches across, of a pale sulphur colour, not fragrant. *Gardenia* in compliment to Dr. A. Garden, a Physician in South Carolina, who was a correspondent of Linnæus.

2. GESNERIA SCEPTRUM, VAR IGNEA.
- Sceptre flowered. Pale flowered variety*
- . [Bot. Mag. 3576.]

GESNERIACEÆ, DIDYNAMIA ANGIOSPERMIA.

Introduced into this country from Brazil, and has bloomed in the Glasgow Botanic Garden in 1836. The flowers are of a dull pale reddish-yellow, with a darker edge to the limb. *Gesnera* in compliment to the celebrated John Gesner.

3. LINUM MONOGYNUM.
- Monogynous Flax*
- . [Bot. Mag. 3574.]

LINEÆ. PENTANDRIA MONOGYNIA.

It is now well known in the country by nurserymen and florists, but we think it deserves extensive publicity, and therefore again bring it to the notice of our readers. It is a most desirable plant for the greenhouse, or if turned out into the open border in a warm situation in summer it will bloom profusely. The large corymbs of fine white blossoms being very showy, a bed of the plant makes a fine appearance, blooming all the summer season.

4. MAXILLARIA STEELII,
- Mr. Steel's*
- . [Bot. Mag. 3573.]

ORCHIDACEÆ, GYNANDRIA MONANDRIA.

A native of Demerara, from whence it was introduced last year by Matthew Steele, Esq. It has bloomed in the collection of John Moss, Esq., Otterspool, near Liverpool. The scape is short and single flowered; the blossom rather large, near an inch and a half across, fragrant, of a dingy reddish-yellow colour. The perianth blotched with deep purple. Lip streaked with purple, red and yellow. It is a singular flowering species, and a valuable addition to this very interesting tribe of plants. *Maxillaria* from the resemblance to the Maxillæ of insects.

5. MEGACLINIUM MAXIMUM,
- Largest*
- . [Bot. Mag. 1959.]

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of Sierra Leone, which has been introduced by Messrs. Loddiges's in whose collection it bloomed in 1836. The flowers are not very interesting, they are very small, produced along a sword shaped rachis, and are of a greenish yellow, spotted with red. *Megacelinium* from *mcgas* large, and *kline* a bed, in allusion to the broad sword-shaped bed or rachis of the blossoms.

6. PERISTERIA CERINA,
- Waxen Dove Flower*
- . [Bot. Reg. 1953.]

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Mr. Knight of King's Road, introduced this curious species from the Spanish Main. It has bloomed in Mr. Knight's collection. The flowers are

large, produced upon a pendulous raceme. They are of a pale sulphur, intermixed with deep yellow; and have a strong scent of juniper. *Peristeria* from *peristeria* a dove. The original kind *Pelata* has a column which resembles a dove hovering with expanded wings.

7. *PHILODENDRON CRASSINERVUM*. *Thick-ribbed*. [Bot. Reg. 1258.

ARACEÆ. MONÆCIA TETANDRIA.

A native of Brazil; and has bloomed in the collection of the Rev. Frederick Beadon, of North Stoneham. It is a climbing plant, which in its native country grows to a considerable extent, fixing itself to the trunks and limbs of trees, and the shoots hanging down like cords from tree to tree rendering the roads often impassable. The arum formed flowers are about four inches long, of yellowish-white colour. *Philodendron* from *phileo* to love, and *dendron* a tree. Alluding to the habit of the plant.

8. *PHALANGIUM POMERIDIANUM*. *Afternoon flowering*. [Bot. Flow. Gard. 381

ASPHODELEÆ, HEXANDRIA MONOGYNIA, SYNONYMS, *SCILLA POMERIDIANA*,
ANTHERICUM POMERIDIANUM.

This plant is cultivated in the very celebrated collection of Mrs. Maryatt, Wimbledon. Its native country is probably the Cape of Good Hope. The bulbs are said to be an excellent substitute for soap. It is a half-hardy bulbous plant. The flowers are produced upon a paniculated spike. Each flower is about an inch and a half across, having narrow undulated petals, white. *Phalangium* from *Phalaggos*, a venomous spider, the plant curing its bite.

9. *SARCANTHUS TERETIFOLIUS*, *Round leaved*, [Bot. Mag. 3571.

ORCHIDEÆ. GYNANDRIA MONANDRIA.

This Orchideous Epiphyte, was introduced some years since into this country by Mr. Brookes of Newington Green. It is a native of China. The flowers are produced upon a spike, seven or eight upon each. Sepals green, streaked with reddish lines. Lip, white. Each flower is about three quarters of an inch across. *Sarcanthus* from *sarkos* flesh, and *anthus* a flower; in consequence of the fleshy nature of the blossom.

10. *SPARAXIS STELLARIS*, *Starry flowered*. [Brit. Flow. Gard.

IRIDEÆ. TRIANDRIA MONOGYNIA.

The flower is of a rich purple colour, the ends of the petals are a little lighter, as is the outside of the petals. The present kind is cultivated by Allen and Rogers at Battersea.

11. *STRANVÆSIA GLAUDESCENS*. *Grey leaved*. [Bot. Reg. 1956.

ROSEACEÆ. ICOSANDRIA PENTAGYNIA.

A very pretty evergreen shrub from Nepal, from whence it was introduced to the garden of the London Horticultural Society, about ten years since. It is about as hardy as a Myrtle, growing well, and blooming in June, if trained against a wall. The plant has been sold out under the name of *Crategus glauca*. The blossoms are produced in a largish corymb, white. They are succeeded by small orange coloured berries. The habit of the plant is to shoot early in spring, and in consequence the ends of the shoots are very liable to be damaged. *Stranvæsia* so named in compliment to the Honourable W. F. Strangways, F. R. S. of Abbotsbury Castle, Dorsetshire, a very great patron of Floriculture, and Botany.

12. SYMPHORICARPOS MONTANUS, *Mountain St. Peter's Wort.* [Botanist.

CAPRIFOLIACEÆ. PENTANDRIA MONOGYNIA.

A hardy shrub, much branched, growing from five to six feet high, and almost evergreen. It is a native of Mexico, found at the height of seven or eight thousand feet. *Symphoricarpos* from *Symphoreo* to collect, and *karpos* a fruit, from the berries being closely crowded together.

REVIEW.

A history and description of the different varieties of the Pansey, or Heartsease now in cultivation in the British Gardens, illustrated with twenty-four coloured figures of the choicest sorts, by I. Sinclair and J. Freeman. London. May, 1837. Thirteen numbers of this neat little work have previously come out; the fourteenth for May, 1837 contains a figure of the Ivor Hero Pansey. The engravings are on stone, and the colouring well executed. The number contains four pages of letter press. The work is very neatly executed, and well worth procuring. This very lovely tribe of flowers demands the attention of every person possessing a flower garden. We grow at the Downham nursery, more than five hundred kinds, including all the first rate flowers that are in the trade, and we are so enthusiastically partial to the Pansey as to induce us to procure every superior kind that it is in our power to do. We have drawings taken of several most splendid seedlings, will which appear in subsequent numbers of the Cabinet. The following judicious observations on raising seedlings are extracted from the work under review:

"As the season for raising seedlings is now approaching, we hope those who wish to excel in this pleasing and interesting pursuit, and have a few leisure hours to bestow upon it, will attend to the suggestions which we presume to offer. Their chances of success would be greatly increased, if they would take the trouble to fertilize the flowers by an artificial process. And this is properly the business of the amateur; for a nurseryman, whose attention is distracted by so many occupations, has no time for such a purpose, but must be content to leave it to nature to perform her own offices, or trust to the insect tribe to carry the farina accidentally from one flower to another. The stock of the amateur indeed, is better suited to this work, than that of the nurseryman; for though inferior in quantity, it is, or ought to be, much more choice in quality, such as grow flowers for sale being obliged to keep many sorts contrary to their own judgment, in order to gratify the taste, or the want of it, of those who deal with them.

We are not ignorant, however, that the task we recommend is both difficult and tedious. The plants are so low in their habit of growth, that a person cannot work upon them without continual stooping, or even going down upon his knees. We would advise those, who wish to try the experiment, and to know the result of their practice, first to select six or eight of the largest and best shaped flowers, and to put them into pots, in which they could be removed into any convenient situation, and brought close to the eye of the operator. Mark the flowers you intend to fertilize with a small piece of matting or thread, tied loosely round each, so as not to interfere with the flow of its juices, and keep a record of the different sorts with which you have crossed them. If the operation is new to you, it will be as well, previously, to dissect a few common flowers in different stages of their growth, in order to become acquainted with their parts, and the different symptoms of their maturity. When the flower begins to expand, you must of course divest it of its male organs, or it would impregnate itself, and all would be lost. This you would soon learn to do, if you would cut open a few flowers when they are partially blown, and observe the five anthers,

which, when ripe, shed their powder, called the pollen, on the stigma, and so fertilize the flower. These anthers therefore must be carefully extracted before maturity, so as not to injure the stigma, which is to be powdered with the fertilizing dust of another flower. A small pair of tweezers will be useful for the first operation, and a soft brush of Camel's hair for the other. Soon after the farina has been put upon the stigma, you will perceive the seed vessel begin to swell gradually, and in the course of a fortnight you will be in fresh danger of having your labour thrown away, for in hot weather the pods will often burst very suddenly, and scatter the seed in all directions. In order to prevent this, tie a small piece of tape or gauze about the pod, leaving it loose enough to allow room for the vessel to swell, but making sure of catching the seed whenever it is ejected. Sow the seed in a separate pot, with a distinct mark to it, that you may learn by the union, of what plants to produce the finest flowers. Put them, when strong enough, into a shady situation, and some of them will show bloom in the ensuing autumn so as to enable you to form a judgment of their merits. And when you have acquired more experience, forget not to furnish us with any useful remarks that may occur to you, for the benefit of others."

SCIENCE OF BOTANY.

Continued from Page 139.

"In exogenous plants, the new matter being added externally, a bark or covering is necessary to protect it, when young and tender, from the action of the atmosphere, and from external injury from other causes: hence an important office of the bark. In endogenous plants, the new matter, being added internally, is provided with an excellent covering, formed of the main substance of the plant, and has no need of a separate protecting integument.

"In spring there is found between the bark and the alburnum a viscid gelatinous fluid called *cambium*, which, it is supposed, is the principal agent in forming the new layers of wood and of bark. This fluid is composed of the residue of the cambium of the preceding season, enriched and renewed by the descending sap, and mixed with some of the secretions of the vegetable.

"M. Mirbel and others are of opinion that the cambium annually forms a new layer of alburnum and a new layer of bark. This is the most simple mode of formation, and probably that which takes place. We know that the cambium can repair the bark when it has been injured; and, as the new layers of wood and bark are formed where this fluid is found, it is not unreasonable to suppose that it acts an important part in this process.

"M. Du Petit-Thouars advanced a singular theory, namely, that the successive formation of woody layers is caused by the development of buds, from which, in spring, issue numerous fibres, which descend in the cambium between the liber and the alburnum. In gliding downwards they meet the fibres which descend from other buds, and form a layer of greater or less thickness, which soon becomes solid, and forms a layer of wood.

"Each bud is regarded as a separate system of vegetation. The buds are considered so many individuals placed upon a common stock, and elongating in two different ways—upwards, forming new stems and branches, leaves, &c.—and downwards, forming roots; the descending fibres being the roots which the buds put forth, and the cambium bearing the same relation to the roots of the bud as the soil does to a germinating seed. M. Thouars considers buds as analogous in structure and mode of development to the embryo of the seed, which in germinating produces a young stem analogous to the scion produced by the growth of a bud. He calls the latter, a fixed or ad-

herent embryo, while he denominates that within the seed a free embryo. Thus the wood and bark are considered as formed of the roots of the buds which are annually developed on the surface of the vegetable.

"Whatever may be the mode in which the formation of the new layers takes place, it is known that the matter which forms them descends from the leaf-buds or leaves, either in the innermost layers of the bark, or between it and the alburnum.

"If all the buds or leaves be removed from the upper part of a branch, no increase in diameter will take place above those that are left. If a ring of bark be removed from a tree, the part below will not increase in thickness, and the upper lip of the wound will heal quickly, while the lower lip will not. This operation has been recommended for improving the fruit of trees; the descending sap or proper juice, confined to the upper part, increases the size of, and enriches the flowers and fruit developed above the place from which the ring has been removed. This is called ringing: care must be taken to make the ring very narrow, in order that the parts may easily re-unite.

"If a ligature be placed tightly round the bark of a tree, the part above the ligature will swell, but not the part below; and it has been observed that the rate of increase of the diameter of any part of a branch or tree is in proportion to the number of leaf-buds developed above that part.

"From their peculiar structure, Exogenous stems readily throw out branches, and hence the form of the trees in this country is so different from that of the Palms. Figure 5 shows the general outline of an oak tree. The part of the tree where vegetation is active being near the outer surface, the buds easily penetrate and grow into shoots, from the sides of which also buds are developed, and thus the tree is branched and subdivided to a great extent, and from a short distance above the ground.

"From the same cause, such trees attain a great thickness and live to a great age. The new matter being added externally, has little resistance to overcome (only that of a thin bark, which is easily distended and pushed out) and thus there is hardly any limit to its increase in diameter, while, becoming only more securely fixed as it grows, and the growth going on between the bark and the wood almost independent of the inner parts, there is as little limit to the duration of the tree. In fact each annual layer of alburnum or bark seems to have an independent existence—hence trees are often found flourishing, though quite decayed and hollow within.

PROPAGATION OF PLANTS.

"There is a very large assemblage of plants which produce their seeds by stamens and pistils, and they are called flowering or phænogamic plants. In most cases the stamen and pistil are together (in the same flower), the flower being then called perfect.

"In some plants the stamen and pistil, though on one plant, are not together, as on the oak and the nettle. The flowers are then said to be monoecious (par. 216), and in these cases the pollen either, falls on the stigma, or is conveyed to it by the wind, or by insects.

"In other plants, as the willow, the hop, one plant has stamens only, while another has pistils only. The flowers in this case are called Dioecious, and the same means serve to convey the pollen as in the last case. A flower with pistils only is called Pistilliferous; one with stamens only is called Anteriferous,

"In the following tribe of plants the pollen must reach the stigma in order that the ovules may ripen and become seeds, and there are many different ways in which this is brought about.

"In a great number of cases the flower is erect, the stamens are longer than the style, so that the anthers are above the level of the stigma; and when the cells of the anther open, the ripe pollen necessarily falls upon the stigma. In other cases, where the pistil is longer than the stamens, the

flower is inverted or drooping, so that the pollen still falls upon the stigma (as in the *Fuschia*). In other cases of this kind, where the flower is not drooping but erect, there is a nectary (a honey store) at the bottom of the flower, which attracts insects: these, agitating the stamens as they enter, and receiving a quantity of the pollen on their bodies, necessarily deposit a portion of it on the stigma as they fly out. In many plants, as in rue, barberry, rock-rose, pellitory of the wall, *kalmia*, grass of *parnassus*, the stamens are formed with an elastic spring, by which they throw the pollen on the stigma, or have a moving power by which they approach the stigma and deposit the pollen upon it. In monoecious plants, the antheriferous flower generally occupy the upper part, so that the pollen falls upon the other flowers. In these, in dioecious, and indeed in all plants, the wind is a leading agent in bringing the pollen (which is a very light powder) to the stigma. In a dioecious plant which grows under water (*Valisneria spiralis*), the (antheriferous) flowers become detached, rise to the surface, and float about, while the pistilliferous flower, which retains its connection with the plant, has a spiral stalk, which unfolds and lengthens out so as to elevate the flower above the surface of the water—there the two kinds of flowers meet, and insects or the wind apply the pollen to the stigma, an operation which does not go on effectively under water. Then the stalk of the pistilliferous flower resumes its spiral form and draws the flower under water, there to perfect the seeds. The *Urticaria*, a plant which grows under water, and has perfect flowers, (par. 170), has bladders attached to its roots, which become filled with gaseous matter, so as to cause the plant to ascend to the surface when the pollen is ripe, and effect the application of the pollen in the air. When this is done, the bladders loose their ariel fluid, and the plant again becoming specifically heavier, descends to ripen the seeds.

“The pollen of the stamens, which falls upon the stigma, being conveyed through the style of the ovules in the germen, vivifies them, causes in them a new and more vigorous growth, so that they enlarge and grow into seeds, bodies which are capable of becoming plants similar to those that produced them.

“When the seeds are ripe, the seed-case, or pericarp opens (dehisces) to let them escape. They fall to the ground, and, under the influence of heat, air, and moisture, take root, grow, produce the same kinds of organs, and pass through their various stages of existence in the same way as the plants which produced them.

“The dehiscence of the pericarp is beautifully seen in willow-herb, violet, broom, and many other well-known plants.

“Most plants produce a considerable number of seeds, and in many cases there is some peculiar construction in the pericarp or seed, by which the seeds are not allowed to fall down and accumulate on the spot where they grew, but are scattered and conveyed to a distance (disseminated) from the parent plant. In most plants that do not drop their seeds around themselves, the wind is the leading agent in dispersing the seeds, being often assisted by the great lightness of the seed, by some appendage, such as wings or feathers (as in willow-herb, in dandelion, and thistle, and the rest of the syngenesious tribe) which the wind in wafting the seed to a distance, or by the pericarp dehiscing at the upper part and sides, so that the seeds do not fall out, but are shaken or blown out by the wind. In other cases as in the broom (*Cytisus*), the balsam (*Impatiens*), the *Oxalis*, there is a mechanical contrivance in the pericarp or seed, which has the effect of a spring, in projecting the seed when ripe, to a distance from the parent plant.

To be continued.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE DAHLIA.—"To a Star in the East," I was much pleased with an article on the Dahlia, contributed by a Star in the East, who promised to continue it, but has not kept his word. I trust, however, he has not yet gone to bed, but that he will still shine for a month or two longer.

June 11th 1837

TIMOTHY.

My compliments to Pensee, and I am obliged for his excellent observations.

ON BONE MANURE.—It was mentioned in your April Number that the remarks of your correspondent T. was too late for that Number. They related, as you perhaps know, if you have not forgotten the circumstance, to an enquiry as to the persons who were able to furnish the article on Bone Manure. I have looked in vain in your last or May Number for any information on the subject. Were the remarks in question, or rather the renewed enquiry, too late for the May Number also?—(It had escaped our notice, but shall be attended to—COND.)

May 6th, 1837.

T.

ON THE HEIGHT OF THE SWEET SCENTED CHINA ROSE WHEN TRAINED AGAINST A WALL.—To what height has the sweet scented China Rose, trained against a wall, been known to grow? An early answer to this, in the Cabinet, will much oblige an

OLD SUBSCRIBER.

REMARKS.

NARCISSUS MINOR ET PUMILA, &c.—Not having read in any Numbers of the Floricultural Cabinet any observations on the culture of Narcissus, I beg to call the attention of the readers of the Cabinet to that beautiful family of plants, whose merits, if better known, would be more extensively cultivated, flowering in the early part of spring, makes them desirable plants, and when planted in beds in sorts or single patches, strikingly beautiful.

N. minor, pumila, cernicus, tenuifolius, and triandrus are well adapted for planting in beds near walks, growing from six to eighteen inches in height, the other sorts, amounting to fifty species and varieties, are desirable plants, and I hope, will shortly become better known to the Florist in general, and more extensively cultivated; and instead of seeing them in botanical collections, they will find a place, in every flower garden.

J. W. D.

MIMOSA PROSTRATA.—A very pretty trailing plant, which blooms profusely, the flowers are of a delicate pink colour. It is admirably adapted for training up a wire trellis pillar, &c. The plant grows very freely. It will grow either in the greenhouse or open air; it deserves a place in either. We have seen it most beautiful, and have procured a quantity of plants.

MONOPHILA INSIGNIS MAJOR. RHODANTHE MANGLESII, &c.—I have had a number of Plants of *Nemophila insignis major* and *Rhodanthe Manglesii* in bloom in pots in my greenhouse for a month, and will doubtless continue for several months. Each kind is allowed a very rich soil, and plenty of pot-room; one plant, however, will soon cover a tolerably sized pot. Both the kinds deserve extensive cultivation.

CLERICUS.

VERBENA TROCEDIANA, &c.—This lovely plant is now blooming profusely with us, and fully equals all that has been said on it, when first noticed it in the Cabinet. It is a most valuable addition to this neat and beautiful flowering genus. We have also obtained a white flowering kind which is highly spoken of, and a fine species with blush lilac flowers, producing large clusters of blossoms. *Clematis azurea grandiflora* is also in bloom with us, and is certainly one of the most charming climbing greenhouse plants yet introduced. Its fine blue flowers produced in profusion, renders it a most desirable plant. It ought to be in every conservatory or greenhouse.

PETUNIAS.—The very striking hybrids we gave drawings of last month, now show their fine and striking blossoms with us in profusion, they richly merit a place in every greenhouse or flower garden,

SHOWS FIXED FOR JULY.—Horticultural Society, Regent-street, three o'clock, Tuesday the 4th.

Metropolitan Society, Crown and Anchor, seven o'clock, ditto.

Wolverhampton and Staffordshire Floral Society, Tuesday the 4th.

Tamworth Horticultural Society, Wednesday the 5th.

Horticultural Society, Chiswick Saturday the 8th.

Ditto ditto Regent-street, three o'clock, Tuesday the 18th.

Metropolitan Society, Crown and Anchor Tavern, seven o'clock, ditto

Wiltshire Horticultural Society, ditto.

Ditto ditto Show Carnations, Members only, Thursday the 20th.

Bath Royal Horticultural and Floricultural Society, ditto.

North London, Dahlias, ditto,

South Essex Horticultural and Floricultural Society Stratford, ditto

Bristol Royal Horticultural and Botanical Society, Tuesday the 25th.

Huddersfield Horticultural Society, Thursday the 27th.

Wingham, Kent, Horticultural and Floricultural Society, ditto

Bedford Horticultural Society. open Show, Friday the 28th.

METROPOLITAN SOCIETY OF FLORISTS AND AMATEURS.—The Committee have determined that the prizes should consist of medals only, which the Committee have had prepared, and which they wish to see received by the persons to whom they may be awarded; and for this reason, they reduce the value of the prize one-third to persons who receive them in money. the medals are;

The small Adelaide medal, value 15s. The large ditto ditto, value £1 10s. The King William medal £3. The small gold Adelaide medal, £7 10s. The large gold Adelaide medal, value £15. The gold King William medal, value £30.

Persons to whom any of these may be awarded will have the option of taking two-thirds of the value in money, or the medals themselves; and these may be received as awarded, or allowed to accumulate, and be received in a more expensive medal.

FOURTH EXHIBITION SHOW JULY 20, (members only)

CARNATIONS.—Best stand of twelve, large medal, Adelaide medal, and small ditto.

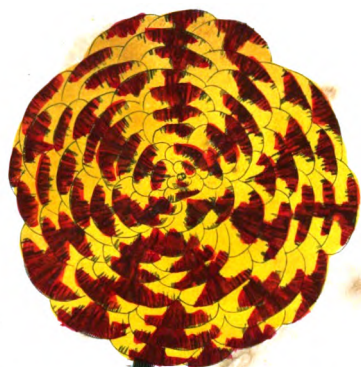
PICCOOTEES.—Best stand of twelve ditto, ditto, ditto.

Entrance, 1s. each stand, first Tuesday in July.

REFERENCE TO THE PLATE.

These very striking Panzies are seedlings in our possession, as soon as plants are ready for sale, notice will be given.

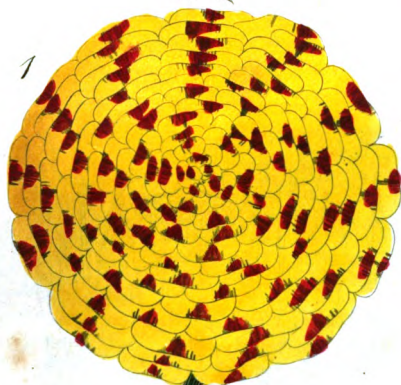
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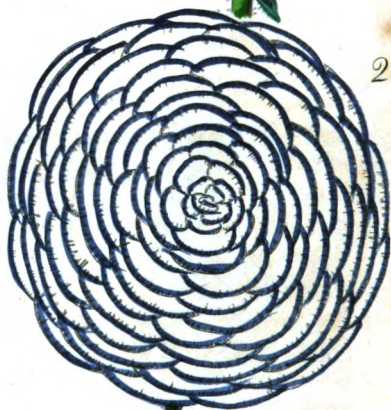
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Ranunculus

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J. & J. Parkin Sc

Floricultural Cabinet

THE
FLORICULTURAL CABINET,

AUGUST 1ST, 1837.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF HEATHS, &c.

BY MR. JOHN FYFFE, GARDENER TO THE REV. W. MANSFIELD, MILTON
BRYANT, WOBURN, BEDFORDSHIRE.

IN the number of your Magazine for February, there is a query on the management of 'Ericæas,' by W. P. Hamelton, in which he complains of being unsuccessful in the cultivation of that interesting tribe of plants, he seems to be anxious for any information on the subject, and from the experience which I have had in their cultivation, I hope to be able to point out a few of the errors which that writer may have fallen into in his management.

Your Correspondent in the first place complains of his Heaths getting naked, or more properly speaking, rusty; this I should say is from the effects of drought, being crowded close together, on the pots being exposed to the powerful rays of the sun; if the pots are placed in the open air as is the practice with the most of our hardy G. H. plants (this is always the case with the more tender sorts of the *Ericææ*: the sun acts so powerfully on the pots when exposed for any period of time, as to dry the ball completely, and allowing the plant to be watered with the greatest care, the substance of peat soil being of a peculiar drying nature, the water often runs off, if the plants are potted high, without penetrating to the centre of the ball; this is the cause of heaths going off so suddenly. When once allowed to get

completely dried up, you may water them and go away, fancying that all is right, when, perhaps, if you were to turn out the plant the water has not penetrated one inch, the next day comes a hot and burning sun, your plant stands exposed as usual, and by the action of the sun the pot has succeeded in completely drying up the ball by mid-day, the plant stands so until night, and for six hours it is actually dying for moisture.

To remedy this defect I would recommend your correspondent to observe the following rule—if he is in the habit of placing his Heaths in the open air, never to do so without plunging the pots to the brims in cinder ashes or sand, the former being the best, not being liable to be infested with worms, keeping the ashes in a moist state by watering, as also giving each plant a regular supply every night, according to its state of dryness. Heaths are much benefited by being partially shaded, when set in the open air, by canvas or any light substance, as the sun acts so powerfully on the foliage, when first taken out of the house, but if your correspondent has a house principally for Heaths, I would say, do not take them out at all, except a few, so as the rest may not be over crowded, leaving air at all times, except in very severe weather, or when cutting winds may occur, if the stage of the house stands high or much exposed to drying winds. When air is admitted to the house, I should recommend the pots to be protected by placing a quantity of (*Hypnum*) among the pots, keeping it moist by watering.

In potting his Heaths, he cannot follow a more successful plan than that practised by Mr. Macnab of the Edinburgh Royal Botanic Garden, which I should say has fully answered the object of that most scientific floriculturist, which is this, keep the ball or centre of the plant when shifting higher than the margins of each pot, and introducing small pieces of free stone round the ball, these pieces are very useful, as they retain the moisture in hot weather, as also absorb it if the plants be over watered, keeping a regular moisture in the ball; each pot should be filled with broken pieces of pot to the thickness of two or three inches, according to the size of the pots, to carry off the excess of moisture, which is injurious in very hot weather; placing some siftings of peat soil next to the drainage, before placing the plant into the pot or tub. If your Correspondent is not so fortunate as to have a supply of free stone, it may not be amiss to say,

that I have used broken pieces of pots in the manner recommended with the stones, with almost equal success, only care must be taken that the pot is soft, or what gardeners call a good pot, not over burnt.

J. F.

June 19th, 1827.

ARTICLE II.

ON THE CULTURE OF THE BALSAM.

BY SCRUTATOR.

ALTHOUGH several papers have been written on the cultivation of the Balsam, yet they are so very complicated, that I am induced after a long experience, to forward to you a method of treatment, which I have found to be very successful and simple. The seeds (which should at least be from four to ten years old) must be sown in a hot bed about the middle or latter end of March, in a soil taken from a cucumber bed, in quantities of half sandy loam and rotten dung, which has been turned over two or three times during the winter. I suffer the plants in the seed-pots to be drawn up about three inches when they are planted off singly into very small pots, filled with the same soil, they must remain until the roots are seen shooting through the hole at the bottom of the pot, when they must be repotted into the next size, and so on continually till they fill pots of the largest size. Care should be taken to keep the plants as near to the glass as possible, and particularly remember to take off the first buds, which strengthens the plant amazingly, and make them blossom more double though later. I generally shade the plants whenever the sun shines very hot upon them, to prevent scorching the leaves. I also use clear pond water after it has been in the frame six hours. By pursuing this course I have been singularly successful in raising Balsams so as to astonish every person in this neighbourhood, and I hope other persons will be as fortunate as myself, after they have read my method.

SCRUTATOR.

P. S. Should the above communication be approved of, I shall with great pleasure inform you of the course of treatment I have

adopted with the *Ipomopsis elegans*; my plants are looking very fine, and are showing for blossom.

In return, I should like to see a list of greenhouse plants of the greatest beauty, stating their colours, the time of blowing, and also the method of propagating them. I should also like to know how to impregnate the *Thunbergia alata alba*, as I have a fine plant, and wish to propagate more from it.*

June 19th 1837.

[* Very readily by cuttings of young shoots being inserted in sand. We should be greatly obliged by the Article on the *Ipomopsis* at an early opportunity—CONDUCTOR.]

ARTICLE III.

AN ADDITIONAL LIST OF NEW CAMELLIAS.

BY MR. GEORGE JOSEPH KAMEL.

My two former communications being favourably received, and by you inserted in Vol. III. and IV. of the Cabinet, I forward you an additional list of new varieties. On page 200 of Vol. IV. it is stated that Camellias are two years coming up from seed, an assertion I can contradict, having plants six inches high in six months, by sowing the seed as soon as ripe, and placing it in the stove.

BRITISH AND CONTINENTAL HYBRID VARIETIES WITH DOUBLE WHITE FLOWERS.

<i>Allnuttia</i>	<i>Graya lepidula</i>
	<i>princeps</i>
	<i>Rives</i>
	<i>rosæflora</i>

SINGLE WHITE FLOWERS.

Palmerii

VARIEGATED FLOWERS.

Adonida
Cloweana
Kingii

PALE OR LIGHT RED FLOWERS.

Bealeii
foliosa
Spofforthia
superba
Roalina

DARK RED FLOWERS.

Allnuttia superba
amœna
Berleziana
cruenta

SIMPLE RED FLOWERS.

amplissima simplex
Helvola
incomparabilis
paradoxa

On page 154 Vol. IV. for *Flosackia Hosackia*.

ARTICLE IV.

A LIST OF FOREIGN FERNS WHICH HAVE STOOD THE OPEN AIR
OF THIS COUNTRY IN NOTTINGHAMSHIRE DURING THE
WINTER OF 1836 and 1837.

BY J. R.

AGREEABLE to my promise of last year I forward you a list of Foreign Ferns which having stood the winter of 1836-7 out of doors may lay some claim to be considered hardy—they having had only the protection of fallen leaves, and to prevent the blowing away, of which a few spruce fir boughs were pricked in the ground around the plants.

If others of your correspondents have made similar trials, I hope they will favour your readers with the result, and indeed any remarks on Ferns, from them will be acceptable, especially as I am aware that with some of your readers in the south and west of England, Ferns are cultivated.

June 15th 1837.

J. R.

Adiantum pedatum	Pteris falcata
Allantodia australis	" arguta
Aspidium tuberosum	" caudata
" auriculatum	" serrulata
" atomarium	Polypodium elatum
" marginale	Physematum molle
" bulbiferum	Woodwardia radicans
Blechnum gracile	Woodsia perrenniana
Doodia caudata	Aspidium acrostichoides
Dickinsonia pilosiuscula	Struthiopteris germanica
Osmunda interrupta	" Pensylvanica
Onoclea sensibilis	Aspidium cœmulum
Pteris hastata	Pteris longifolia

ARTICLE V.

ON STIKING CUTTINGS OR SLIPS OF PLANTS IN WATER.

BY AN OPERATIVE.

I TROUBLE you with these few remarks, but hope they will not exclude valuable matter: having acted upon the suggestion of one

of your Correspondents regarding striking cuttings in water, I have tried a great many Dahlia roots this spring in water, and every shoot has struck freely, excepting where I lightly fastened a bit of brass round the stem to keep the lower leaves close, that the shoot might go into the phial, the lower leaves of which rotted. I cut the shoots in the usual way, close under a joint, and then hang the bottles, which ought to be wide-mouthed, some green, some white glass, against a wall, under the skylight of a warm work-shop in London, in the full glare of the sun, from the first moment of putting them in the water. A shoot of an old root, the Springfield Rival, I put in the latter end of May, I noticed particularly on the 12th day after putting it in had emitted one root, and on the fifteenth, it had four fibres or small lobes, an inch long, the growth being so rapid after it starts.

Fuschia gracilis I am trying the same way, and find them strike in the same time, this way may be slower than the ordinary way of hot-bed strikings, but I think it will suit those, who like me, have a hot-bed at the beginning of the season, but cannot command one whenever occasion may require it.

AN OPERATIVE.

ARTICLE VI.

METHOD OF OBTAINING FLOWERS OF DIFFERENT COLOURS FROM THE SAME STEM.

BY AN AMATEUR.

I have tried the following process with great success; and if you think it worthy a place in the *Floricultural Cabinet*, it is at your service. Split a small twig of elder-bush lengthways, and having scooped out the pith, fill each of the compartments with seeds of flowers of different sorts, but which blossom about the same time; surround them with mould, and then tying together the two halves of the twig, plant the whole in a pot filled with earth properly prepared. The stems of the different flowers will then be so incorporated as to exhibit to the eye only one stem, throwing out branches covered with flowers analogous to the seed which produced them.

AN AMATEUR.

PART II.

REVIEW.

THE FLOWER GARDEN, including Directions for the Arrangement and Cultivation of all Garden Flowers, &c. London, Orr & Co.

We have received the first part of this publication, June, 1837, and find it contain some useful and interesting remarks. The following extract on Rock Work, is a specimen, of its style.

We recommend the Work to our readers. The Author has not stated whether the parts in future, are to come out monthly, quarterly, or annually.

"The Chinese, who are partial to imitations of the grander features of nature, in miniature, frequently in the smallest area of a town court-yard, have rough shapeless stones thrown together in heaps, to represent rocks, with plants growing in the crevices. It is by no means unusual, in our own suburban gardens, to see similar fanciful, and incongruous, heaps of stones, chiefly irregularly formed flints, the sorise of forges, and large bits of coke from the gas works, covered with sedums, house-leek, and other plants which may be made to grow in such situations. Most of these are planted, and executed in the worst taste.

"The finest specimen of this kind of work which was ever, perhaps, executed, was laid out by Mr. Forrest, now of the Kensington Nursery, for his Grace the Duke of Northumberland, at Sion House. The imitation is, indeed, so complete, that when the back of the visitor is turned to the superb conservatory, he might almost fancy himself at the entrance of a Highland glen. The turf on the edge of this rock-work is in parts studded with moss, while little knolls, which nobody would doubt being real ant-hills, are covered with wild thyme and hare-bells. The expense of this, however, must be enormous, as there are blocks of granite of several tons weight; and few amateurs, we think, would attempt to rival this. But when tastefully planned, and well executed, rock-work may be made a very interesting feature of a flower-garden. The following remarks on the subject from "Chambers' Edinburgh Journal," will give the reader some good hints, which he may adapt to circumstances and situation, should he be inclined to construct rock-work for flowers.

"The rocky ravine, the mountain's brow, and the sea-beach, are the most fertile sources of materials for a rockery; and it is necessary, in selecting them, to pay minute attention to the manner in which the various rock are deposited in their several beds, and also to the mosses, heaths, and ferns, which are congenial to them; for, in proportion as the selector shall succeed in imitating nature, will he please his own eye, and gratify his friends. Having fixed on a quarter whence materials are to be procured, the next object is to find out an intelligent workman, who may execute the charge entrusted to him with care. On this a good deal depends; and some pains should be taken to make him understand thoroughly what is wanted. The size of the stones should always be varied, but proportioned upon the whole to the intended size of the rock-work. A number of detached erections never look well; they are stiff and artificial. The whole should show an evident and well-defined connection; and, with regard to the stones, the greatest possible variety in form and size should be studied. The

foundation should consist of mounds of earth, which answer the purpose as well as any more solid erection, and will make the stones go farther. Rocks of the same kind and colour should be placed together ; if intermixed they seldom wear a natural appearance. A dark cave, penetrating into the thickest part of the erection, is not very difficult to construct, and, when encircled with ivy, and inhabited with a pair of horned owls, which may be easily procured, it will form a most interesting object. Rock plants of every description should be profusely stuck around, and, in one short twelvemonth, the whole scene will exhibit an impress of antiquity far beyond anticipation. The whole should be enclosed with forest-trees of large foliage, that the visitor to the scene may step upon it unexpectedly. Water in all cases adds greatly to the general effect, and a small pond permits the construction of a rocky island, which should be formed with jutting points, for the sake of the reflection in the water. By a simple expedient, streams of water may be made to issue from the rocks, or spout into the air, and fall in beautiful cascades. This is done by placing a cask in an elevated spot at a little distance, and leading under ground, pipes to the spot required, where, by service pipes, anything wished by the erector may be easily managed. A cask holding thirty-five gallons might keep such falls playing for an hour, and might be kept out of sight. A pond, also, would permit the cultivation of native and foreign succulent plants ; and gold fish and perch might be introduced, with a water-hen or two, and a few of the ducker species of sea-fowl. In absence of a pond, or any similar supply of water, a pump-well might still be made, without much labour, to enliven the rockery with water falls.

“The whole undertaking, when completed, will present a field of varied and interesting study, and more than compensate for all the attention and outlay bestowed upon it. The aquatic and rock plants which formerly were ‘far to seek and ill to find,’ will thus be brought within the range of everyday observation ; the wagtail, oxeeye, and stonechatter, will be attracted to the spot, not, perhaps, because they are lovers of the picturesque, but because they find everything here suited to their nature ; and colonies of the wild bee will soon be seen, and heard humming on their winged instruments around the interstices of the rocks, and heavily laden with their winter store. These are all objects which not only please the eye, but from which man may derive grave lessons, that, well digested, may make him a better and a wiser man.”

“On the steep edges of woods where the falling down of a brow has exposed the more massive roots of large trees, and more in forests where trees have been torn up by the roots, moss frequently accumulates, annually dies and soon forms soil, where we may sometimes meet with pretty native flowers, such as wood-sorrel (*Oxalis acetosella*), wood anemone (*Anemone nemorosa*), elegant St. John's wort (*Hypericum pulchrum*), and the like. This accidental feature of natural woods has been imitated in gardens, by collecting, in some border or compartment, old stumps and roots of trees, and throwing, on such parts of them as will permit it to lie, compost fitted for the growth of the plants intended to be cultivated there. It is necessary to remark, however, that as the soil will be necessarily shallow, it will require plants that will thrive without much water.

“The authoress of the *Florist's Manual* says that “fragments of stone may be made use of, planted with such roots as flourish among rocks, and to which it might not be difficult to give a natural appearance, by suiting the kind of stone to the plant which grows naturally among its *debris*. The present fashion of introducing into gardens this kind of rock-work, requires the hand of taste to assimilate it to our flower borders, the massive fabric of the rock being liable to render the lighter assemblage of the borders diminutive and meagre. On this point caution only can be given, the execution must be left to the elegant eye of taste, which, thus warned, will quickly perceive such deformity. I must venture to disapprove of the extended manner in which this mixture of stones and plants is sometimes introduced

—not having been able to reconcile my eye, even in gardens planned and cultivated with every advantage which elegant ingenuity can give them, to the unnatural appearance of artificial crags of rock and other stones interspersed with delicate plants, to the culture of which the fertile and sheltered border is evidently necessary,—being decided that nothing of the kind should be admitted into the simple parterre, that is not manifestly of use to the growth of some of the species therein exhibited.'

FLOWERING PLANTS SUITABLE FOR ORNAMENTAL ROCK-WORKS.

"The compost used for rock-work, should be prepared according to the nature of the soils particularised in this list.

HARDY ANNUALS.

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| <p>Calyxea Madwort. <i>Alyssum calycinum</i>. Flowers July and August, in sandy peat soil.</p> <p>Hairy Madwort. <i>Alyssum hirsutum</i>. Flowers June and July, in common garden soil.</p> <p>Nail-wort-leaved Bell flower. <i>Campanula drabæfolia</i>. Flowers July and August, in sandy loam.</p> <p>Violet Thlaspi Treacle Mustard. <i>Clypeola l'on Thlaspi</i>. Flowers May and July, in common garden soil.</p> <p>Musk Heron's Bill. <i>Erodium moschatum</i>. Flowers May and July, in sandy loam.</p> <p>Prostrate Toadflax. <i>Linaria prostrata</i>. Flowers in June and July, in common garden soil.</p> <p>Tangier Pieridium. <i>Pieridium Tingitanum</i>. Flowers in June, in common garden soil.</p> <p>Mignonette. <i>Reseda odorata</i>. Flow-</p> | <p>ers from June till October, in rich mould.</p> <p>Atocion Catchfly. <i>Silene Atocion</i>. Flowers May and July, in sandy loam</p> <p>Small red Catchfly. <i>Silene rubella</i>. Flowers May and June in common garden mould.</p> <p>Prickly Trefoil. <i>Trifolium echinatum</i>. Flowers June and July, in common garden mould.</p> <p>Banatian Violet. <i>Viola Banatica</i>. Flowers in April and September, in rich garden soil.</p> <p>Shore Violet. <i>Viola littoralis</i>. Flowers in June and July, in peat and loam.</p> <p>Heartsease. <i>Viola tricolor</i>. Flowers all the summer, in common garden soil.</p> <p>Tenore's Candy Tuft. <i>Iberis Tenoreana</i>. Flowers in June and July, in common soil.</p> |
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BIENNIALS.

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| <p>Rock Cethionema. <i>Cethionema saxatile</i>. Flowers in June and July, in common garden mould.</p> <p>Throatwort-like Bell-flower. <i>Campanula cervicaria</i>. Flowers in July in sandy peat.</p> <p>Thrysoid Bell-flower. <i>Campanula thrysoidea</i>. Flowers from June till August in sandy peat.</p> <p>Common Carline Thistle. <i>Carlina vulgaris</i>. Flowers from June till September, in common soil.</p> <p>Wallflower. <i>Cheiranthus cheiri</i>. Flowers in April and July, in rich mould.</p> | <p>Hoary Stock. <i>Mathiola incana</i>. Flowers in May and November, in loam and peat.</p> <p>English Scurvy grass. <i>Cochlearia Anglica</i>. Flowers in May, in common garden mould.</p> <p>Danish Scurvy grass. <i>Cochlearia Danica</i>. Flowers in May and June, in common mould.</p> <p>Long flowered Viper's Bugloss. <i>Echium macranthum</i>. Flowers in July and August, in common garden mould.</p> <p>Violet-coloured Viper's Bugloss. <i>Echium violaceum</i>. Flowers in July</p> |
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Vol. V.

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- and August, in common garden mould.
- Common Viper's Bugloss. *Echium vulgare*. Flowers in July and August, in loamy peat.
- Garland Hedysarum. *Hedysarum coronarium*. Flowers in July and August, in common garden mould.
- Pale Hedysarum. *Hedysarum pallidum*. Flowers in June and July, in sandy loam.
- Alyssum Horehound. *Marrubium alyssum*. Flowers in July and August, in sandy loam.
- Dwarf Mountain Germander. *Teucrium montanum*. Flowers in July and October, in common garden mould.
- Lambert's Vervain. *Verbena Lambertii*. Flowers in July, in common garden soil.

PERENNIALS.

- Clavenna's Milfoil. *Achillea Clavennæ*. Flowers in June and July, in loamy peat.
- Mountain Milfoil. *Achillea montana*. Flowers from June till August, in common mould.
- Roseate Milfoil. *Achillea rosea*. Flowers from June till August, in common mould.
- Tomentose Milfoil. *Achillea tomentosa*. Flowers in May and October, in common mould.
- Alpine Bugle. *Ajuga Alpina*. Flowers in July and August, in common mould.
- Pyramidal Bugle. *Ajuga pyramidalis*. Flowers in May and June, in sandy peat.
- Alpine Ladies' Mantle. *Alchemilla Alpina*. Flowers in July, in common garden mould.
- Smooth Ladies' Mantle. *Alchemilla glabra*. Flowers in July and August, in common mould.
- Five-leaved Ladies' Mantle. *Alchemilla pentaphylla*. Flowers in July, in common garden mould.
- Mountain Madwort. *Alyssum montanum*. Flowers in July and August, in sandy loam.
- Alpine Madwort. *Alyssum Alpestre*. Flowers in July and August, in common mould.
- Rock Madwort. *Alyssum saxatile*. Flowers in April and May, in sandy loam.
- Wall Madwort. *Alyssum murale*. Flowers in April and May, in common mould.
- Meadow Anemone. *Anemone pratensis*. Flowers in May, in sandy peat.
- Alpine Anemone. *Anemone Alpina*. Flowers in July in sandy peat.
- Siberian Anemone. *Anemone Sibirica*. Flowers in June in sandy peat.
- Mount Baldo Anemone. *Anemone Baldensis*. Flowers in May, in sandy peat.
- Rock Chamomile. *Anthemis saxatilis*. Flowers in July and August, in common mould.
- Mountain Kidney Vetch. *Anthyllis montana*. Flowers in June and July, in sandy loam.
- White Mountain Kidney Vetch. *Anthyllis montana alba*. Flowers in June and July, in sandy loam.
- Alpine Columbine. *Aquilegia Alpina*. Flowers in May and June, in common mould.
- Siberian Columbine. *Aquilegia Sibirica*. Flowers in May and July, in common garden soil.
- Canadian Columbine. *Aquilegia Canadensis*. Flowers in April and May, in sandy peat.
- Pyrenean Columbine. *Aquilegia Pyrenaica*. Flowers in May and July, in sandy peat.
- Alpine Wall-cress. *Arabis Alpina*. Flowers in March and May, in peat and loam.
- Stone Wall-cress. *Arabis saxatilis*. Flowers in May, in common garden mould.
- Murale Wall-cress. *Arabis muralis*. Flowers in May and July, in common mould.
- Rock Wall-cress. *Arabis petrææ*. Flowers in May and July, in common mould.
- Daisy-leaved Wall-cress. *Arabis belidifolia*. Flowers in May and June, in peaty loam.
- Mountain Sandwort. *Arenaria montana*. Flowers in April and July, in sandy peat.
- Rock Sandwort. *Arenaria saxatilis*. Flowers in July and August, in sandy peat.

- Mountain Arnica. *Arnica montana*. Flowers in July and August, in peat and loam.
- Icy Arnica. *Arnica glacialis*. Flowers in July and August, in peat and loam.
- Swiss Arnica. *Arnica Helvetica*. Flowers in June and July, in rich mould.
- Greenland Wormwood. *Artemisia Greenlandica*. Flowers in June, July, and August, in sandy loam.
- Canadian Milk Vetch. *Astragalus Canadensis*. Flowers in June and July, in sandy loam.
- Lapland Diapensia. *Diapensia Lapponica*. Flowers in April, in sandy peat.
- Deltoid Aubrietia. *Aubrietia deltoidea*. Flowers in March till May, in peaty loam.
- Purple Aubrietia. *Aubrietia purpurea*. Flowers in May and June, in common mould.
- Foxtail Betony. *Betonica alopecurus*. Flowers in July, in common garden mould.
- Alpine Braya. *Braya Alpina*. Flowers in June, in peaty loam—a curious and interesting plant.
- Carpathian Bell-flower. *Campanula Carpatica*. Flowers in July and August, in peat and loam.
- Hill Bell-flower. *Campanula collina*. Flowers in June and July, in peat and loam.
- Russet Bell-flower. *Campanula pulla*. Flowers in June and July, in common mould.
- Dwarf Bell-flower. *Campanula pumila*. Flowers in June, in peaty mould.
- Garganian Bell flower. *Campanula garganica*. Flowers in June, in peaty mould.
- Round-leaved Bell-flower. *Campanula rotundifolia*. Flowers in July, in common garden mould.
- Rock Bell-flower. *Campanula saxatilis*. Flowers in May and August, in peaty loam.
- Alpine Bell-flower. *Campanula Alpina*. Flowers July, in peat and loam.
- Asarum-leaved Cardamine. *Cardamine Asarifolia*. Flowers in July and August, in peaty loam.
- Broad-leaved Mouse-ear. *Cerastium latifolium*. Flowers in June and July in common mould.
- Alpine Mouse-ear. *Cerastium Alpinum*. Flowers in July, in peaty loam.
- Spring Phlox. *Phlox vernalis*. Flowers in February, in common mould.
- Sedum-like Cherleria. *Cherleria sedoides*. Flowers in June and July, in common mould.
- Dark-leaved Golden-flower. *Chrysanthemum atralum*.
- Rock Scurvy-grass. *Cochlearia saxatilis*. Flowers in June and July, in sandy loam.
- Hill Pink. *Dianthus collinus*. Flowers in July and September, in sandy loam.
- Hyssop-leaved Pink. *Dianthus hyssopifolius*. Flowers in June and October in common mould.
- Alpine Pink. *Dianthus Alpinus*. Flowers in June and July, in sandy loam.
- Mountain Pink. *Dianthus montanus*. Flowers in June and September, in sandy loam.
- Rock Pink. *Dianthus petræ*. Flowers in July and August, in sandy loam.
- Feathered Pink. *Dianthus plumarius*. Flowers in June and August, in sandy loam.
- Aizoon-like Draba. *Draba aizoides*. Flowers in February and April, in sandy loam.
- Ciliate-leaved Draba. *Draba ciliaris*. Flowers in February and April, in sandy loam.
- Cuspidate Draba. *Draba cuspidata*. Flowers in February and April, in sandy loam.
- Alpine Draba. *Draba Alpina*. Flowers in April and May, in common mould.
- Rock Draba. *Draba rupestris*. Flowers in May and July, in sandy loam.
- Alpine Willow-herb. *Epilobium Alpinum*. Flowers in June, in sandy loam.
- Mountain Willow-Herb. *Epilobium montanum*. Flowers in June and July, in common mould.
- Alpine Barren-wort. *Epimedium alpinum*. Flowers in May and June, in peaty loam.
- Alpine Hedge Mustard. *Erysimum Alpinum*. Flowers in May and June, in sandy loam.
- Lancaster Crane's-bill. *Geranium Lancastriense*. Flowers from June till September in common mould.

- Crimson Crane's bill. *Geranium sanguineum*. Flowers from June till September, in sandy loam.
- Scarlet Avens. *Geum Coccineum*. Flowers in July and August, in peat and loam.
- Pyrenean Avens. *Geum Pyrenaicum*. Flowers in June and July, in peaty loam.
- Radiated Avens. *Geum Radiatum*. Flowers in June and July, in common mould.
- Obscure Hedysarum. *Hedysarum obscurum*. Flowers in July and August, in sandy loam.
- Alpine Hedysarum. *Hedysarum Alpinum*. Flowers in July and August, in sandy loam.
- Sand Cudweed. *Helichrysum arena-rium*. Flowers in July and September, in sandy peat. This genus was formerly, *GNAPHALIUM*, and is known in many gardens by that name.
- Fair St. John's wort. *Hypericum pulchrum*. Flowers in July, in peat and loam.
- Mountain St. John's-wort. *Hypericum montanum*. Flowers in July and August, in common mould.
- Alpine Toadflax. *Linaria Alpina*. Flowers in June and July, in sandy loam.
- Rock Toadflax. *Linaria saxatilis*. Flowers from June till September, in sandy loam.
- Pyrenean Petrocallis. *Petrocallis Pyrenaica*. Flowers in May and June, in peaty loam.
- Beautiful Cinquefoil. *Potentilla formosa* of Don, *P. Nepalensis* of Hooker. Flowers in June and July, in common garden mould.
- Rock Cinquefoil. *Potentilla rupestris*. Flowers in May and June, in common mould.
- Rock Cinquefoil. *Potentilla petræ*. Flowers from May till July, in common mould.
- Arctic Bramble. *Rubus arcticus*. Flowers in May and August, in peaty loam.
- Rock Bramble. *Rubus saxatilis*. Flowers in June, in common mould but should be reserved for large aggregations of Rock Work, as should *R. arcticus*.
- Aizoon Saxifrage. *Saxifraga aizoides*. Flowers in June and July, in sandy peat.
- Snowy Saxifrage. *Saxifraga nivalis*. Flowers in June and July, in sandy loam.
- Opposite-leaved Saxifrage. *Saxifraga oppositifolia*. Flowers in March and April, in sandy peat and loam. A more suitable and beautiful plant cannot be appointed to adorn the brow, and enliven the bosom of artificial rock-work.
- Rock Saxifrage. *Saxifraga petræ*. Flowers in April and May, in sandy loam.
- Moss-like Saxifrage. *Saxifraga hypnoides*. Flowers in April and June, in decayed stone or sand, with peat.
- Podolian Schivereckia. *Schivereckia podolica*. Flowers in June and July, in sandy peat.
- English Stone Crop. *Sedum Anglicum*. Flowers in July and August, in common mould.
- Corsican Hedge Nettle. *Stachys Corsica*. Flowers July and August, in common mould.
- Imperato's Orpine. *Telephium Imperati*. Flowers in June and August, in sandy loam.
- Rock Valerian. *Valeriana saxatilis*. Flowers in July, in common mould.
- Mountain Valerian. *Valeriana montana*. Flowers in June and July, in common mould.
- Rock Veronica. *Veronica saxatilis*. Flowers in June in common mould.
- Scarlet Vervain. *Verbena melindris*. Flowers all the summer, in light rich mould.
- Common Indian Fig. *Opuntia vulgaris*. Flowers in August, in sandy loam.
- Large-flowered Violet. *Viola grandiflora*. Flowers in May and August, in peaty loam.
- Rock Violet. *Viola lutea*. Flowers in May and July, in peaty loam.

RULES.

- Twisted Garlic. *Allium flexum*. Flowers in July, in common mould.
- Pyrenean Fritillary. *Fritillaria Pyrenaica*. Flowers in May and June, in common mould.
- Pyrenean Star of Bethlehem. *Ornitho*

<p>golum Pyrenaicum. Flowers in June and July, in common mould. Little Wood-sorrel. <i>Oxalis acetosella</i>. Flowers in April and May, in common mould.</p>	<p>Violet-coloured Wood-sorrel. <i>Oxalis violacea</i>. Flowers in May and June, in sandy peat."</p>
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SCIENCE OF BOTANY.

Continued from page 166.

"In most plants which do not drop their seeds around themselves, the wind is the leading agent in dispersing the seeds, being often assisted by the great lightness of the seed, by some appendage, such as wings or feathers (as in willow-herb, in dandelion, and in thistle, and the rest of the syngenesious tribe, which aid the wind in wafting the seed to a distance, or by the pericarp dehiscing at the upper part and sides, so that the seeds do not fall out, but are shaken or blown out by the wind. In other cases as in the broom (*Cystisus*,) the balsam, (*Impatiens*,) the *Oxalis*, there is a mechanical contrivance in the pericarp or seed which has the effect of a spring, in projecting the seed, when ripe, a distance from the parent plant.

"The use of these contrivances for dispersing seeds is obvious. They would choke each other in germinating close together, if they simply fell to the ground, and be thus lost or wasted. When the parent plant remains, (as in trees), they would be superfluous at the spot where there is already a plant of the same kind; but being dispersed, the seeds are carried abroad and get room to germinate—They grow up and fertilize other places, and thus perpetuate the species, and increase the useful products which the plant may yield to the animal creation.

"Animals are frequently the means of the dispersion of seeds. Rivers and even seas also aid in spreading seeds.

"New plants arise from three sources, 1st. from seeds, which when placed in a fit situation, become new plants, of the same species as that which produced them, though frequently of a different variety. Plants are divided into Genera, Species, and Varieties. Each genus includes many species, and, each species many varieties. The varieties of any species differ in particulars which are not deemed of much importance, such as colour, size, &c. and a seed always produces a plant of the same genus and species as that of the parent, but frequently of a different variety. The commencement of the growth of the seed is called germination. 2nd, From buds, which are also capable of producing new plants. In this case, it is always the same variety that is produced. 3d, From slips or branches, which, when treated in a particular manner, are capable of becoming entire and independent plants, when separated from the parent. This is called propagation by slips or layers; and in this case also, we always obtain the same variety. This latter mode might be included along with the second, thus making two principal sources of vegetation—seeds and buds.

GERMINATION.

"A perfectly formed seed may be considered a young plant, the vital energies of which are in a dormant or latent state, but ready to be excited to action when the proper stimuli are applied; and containing a quantity of matter in a state to be easily formed into proper nutriment, and applied to its support before it is able to provide for itself.

"Seeds possess a great quantity of carbon. This substance, by its antiputrescent qualities and hardness, prevents the seeds from undergoing putrefaction, and thus preserves it for a great length of time. All that is necessary for preserving seeds is, to prevent germination and putrefaction. For

this purpose, they must be carefully excluded from the action of heat and moisture, and other chemical agents. Seeds retain their vitality for a very long period—for hundreds, or even thousands of years. Seeds which have been proved to have been not less than one thousand eight hundred years old, have germinated and produced thriving plants! and plants have appeared, on turning up the ground in some situations—the seeds of which are conjectured to have been buried a much longer period.

“ Four conditions are necessary for the process of germination, the presence of water, of heat, and of air, and the exclusion of light.

“ Water softens the integuments, and renders them capable of being burst by the swollen embryo; dissolves the nutritive matter contained in the seed thus reducing it to a fit state to be absorbed for the nutrition of the embryo; conveys in solution nutritive particles from other sources; and furnishes two important ingredients in the composition of vegetables.

“ The air, by means of the oxygen which it contains, effects a chemical change on the farina of the seed. The oxygen combines with the carbon, and forms carbonic acid, which escapes; and thus the proportion of oxygen and hydrogen being increased by the expulsion of the carbon, the farina is converted into a semi-fluid substance, of a saccharine or mucilaginous nature, consisting of starch, gum, and sugar, well adapted for the nutrition of the plant in its infant state.

“ Heat always promotes chemical combination and decomposition, and thus assists the action of the water in dissolving the hard parts of the seed, and that of the air in its part of the process. Most probably heat acts as a general stimulus to the absorbents in the seed. Seeds cannot be made to germinate in very cold weather, except by the application of artificial heat. Too great heat also checks germination, because it destroys the vitality of the seed.

“ Light is unfavourable to germination, because it disposes to an accumulation of carbon in the seed, and a consequent hardening of the parts, or rather prevents the expulsion of carbon, and consequent softening of the parts, which if necessary they should be taken up and applied to the use of the plant. The seeds of red poppy and charlock remain in the ground and retain their vitality for a long period; hence they are frequent on new banks or newly upturned ground.

“ From the operation of these causes, it will be seen why seeds planted too deeply in the earth do not germinate. The air has not access to them, and therefore, from the want of that important stimulus, they remain torpid. Hence it is that earth newly dug up frequently becomes covered with weeds, the seeds of which soon germinate when exposed to the air.

“ Placing seeds at a certain depth in the earth excludes them from the access of light which is so injurious to germination; insures a supply of moisture, which would not remain with them were they placed at the surface; protects them from the wind, and from the attacks of animals, and enables the roots to take a firm footing in the soil.

“ When the germination has commenced, the seeds become soft, and swells, oxygen is absorbed, and carbonic acid disengaged; the particles of the covering of the seed loose their cohesion, and it bursts to make way for the elongation of the embryo; the radicle elongates and descends, often attaining a considerable length before the gemmule has made any progress, and soon exercises its function of absorbing food; the cotyledons expand and become seminal leaves, which afford nourishment to the young plant in the first stage of its existence, by elaborating the sap, and wither when the proper leaves of the plant have unfolded, or remain under the surface, are gradually absorbed, and disappear; the gemmule or first bud gradually unfolds and enlarges; the leaves and stem appear, and we now have a young plant, a living being, able to provide its own sustenance, and to apply it to its increase, and to the formation of seeds to perpetuate the species.

“ In the operation of malting, the object is to convert the farina of the

seed into sugar. For this purpose the seed is made to germinate, and this process is stopped (by heating) at that point at which it has been found there is the greatest quantity of saccharine matter in the seed. Were germination allowed to proceed further, the saccharine matter would be taken up for the nutrition of the young plants, and its nature completely altered.

PROPAGATION BY BUDS.

"Plants are propagated by buds, in four different ways. 1st, By means of the bulbs which grow at the base of the scales in the bulbous root, as in the Snowdrop or Lilly; these bulbs are soon detached from the parent bulb, and become independent plants. 2. By means of the bubils which grow upon the stem in the axilla of the leaves, as in the Corral-root (*Dentaria bulbiflora*), and in the Orange Lilly (*Lilium bulbiferum*), or in the place of the flowers, as in the Mountain Garlic (*Allium Carinatum*); these become detached, and form new plants. 3. By means of the buds or small bulbs which grow at the margins of the leaves in the Bryophyllum, and the bog Orchis (*Malaxis paludosa*); and 4. By means of the minute buds or eyes found in the tubercles of various plants as the potato (*Solanum Tuberosum*).

"In viviparous Alpine Bistart (*Polygonum Viviparum*) the pistil of the lowermost flowers generally become a bulb (bud) which begins to grow and throw out leaves before it falls off, and being detached, strikes root and forms a new plant. The seeds in this plant are seldom ripened. Sheep's Fescue Grass (*Festuca ovina*) frequently produces in place of flowers, buds, as fall off as bulbs, and vegetate; this is also the case with Alpine Meadow-grass (*Poa alpina*) and Sand Garlic (*Allium arenarium*). Plants which form buds or bulbs which they throw off, and which then vegetate independently, are called viviparous.

"All these resemble seeds in this, that when detached from the parent and placed in the earth, they produce new plants. They differ from seeds in not being formed by flowers; in not being able to preserve their vitality for such a length of time; in not having distinct parts such as radicle, gemmule, and cotyledons, being merely extensions of the substance of the parent; and in always producing the same variety. Hence one advantage of propagating the Potato by buds; we have found a variety well adapted for use as an article of food, and we can ensure its reproduction. If grown from a seed, a very different variety might be produced, which would not have the same nutritious properties. In fact, plants arising from buds, are regarded as a continuation of the same individual—hence they in time become exhausted and deteriorated.

PROPAGATION BY SLIPS AND LAYERS.

"Propagation by layers consists in surrounding a young branch with moist earth, in which case it throws out roots, and very soon becomes an independent plant. It is customary to make a small incision at the part placed in the earth, or to pass a ligature round it. This intercepts the descending sap, which, by being accumulated, excites the latent buds, and these being developed in the earth, become roots.

"Sometimes the branch is bent downwards and fastened in the earth, as in the Vine, which is always propagated in this way; and many plants propagate themselves naturally in this way, the stems or branches lying on the earth, and taking root where they come immediately in contact with it, as the Currant bush and Laurel. At other times the branches are surrounded with earth in its natural position, and detached when it has taken root.

"Propagation by Slips much resembles the preceding mode. The only difference is, that the branch or slip is detached from the parent before being made to put out roots. The slips or cuttings of most trees that have a light white wood, as the Willow, the Ash, or the Poplar, easily take root when placed in the earth; and indeed the Willow is reproduced chiefly in this

way. It is difficult to propagate by slips, woods which are very dense and contain much resin, as the Fir and Oak.

"These processes for the propagation of plants are, in many cases preferred to multiplying by seed. Propagation by slips or layers always produces the same variety, as that from which the slip is taken, so that we have a plant that produces good fruit by propagation in either of these modes, several may be raised bearing fruit equally good. The tree is always more speedily in bearing fruit when formed in this way, than when grown from a seed.

"It is an interesting fact, and which is turned to good account in the cultivation of fruit trees, that, when the tree is raised in this way, the number of seeds in the fruit is almost always less than when produced from a seed, so that more of the juices and strength of the plant are expended in perfecting this fruit. The Vine when raised from seed, has four seeds in each grape; but frequently only two when propagated by layers.

"The Sugar-cane, which is propagated nearly in a similar manner, bears no seed at all, but the other parts of the plant are richly developed. Thus also, the seeds of the plants mentioned before are rarely ripened; and in common Solomon's Seal (*Convallaria multiflora*), the berries are seldom ripened, the plant increasing much by root."



Outlines of Human Physiology. By HERBERT MAYO.

In lately perusing this new work, we found the following interesting account of an experiment to determine why the roots of plants shoot downwards, by the ingenious Mr. Young:—

"It is impossible not to be struck with the close analogy which holds between the phenomena of the irritability and movements of the sensitive plants and many of the instinctive motions of animals. The discrimination evinced by plants is a subject no less curious. Climbing plants stretch towards objects calculated to support them; a shrub when growing upon a wall, when it has exhausted the nourishment which its situation afforded, has been known to drop a long root to the soil below. The daisy, in rank grass, bears a flower upon a long stalk; on a close shaven lawn, its flower is sessile. These and similar instances have been occasionally ascribed to an instinct in plants; it is much more philosophical to suppose, that the growth of plants is determined by physical impressions alone, such as variations of moisture or temperature, and exposure to or deprivation of light: and that nature, instead of imparting perception to plants as their guiding principles, has attained her purpose by another method, having so framed and endowed the vegetable economy in accordance with the circumstances in which it is placed, that the common accidents of the elements and of the seasons are likely to bring it to perfection. Several remarkable examples go to prove the correctness of the preceding views, out of which it may be proper to adduce the following: it is well known that, in whatever position a seed is laid in the ground, the plumule invariably rises towards the surface of the soil, while the radicle, on the contrary, shoots downwards. Upon the hypothesis that physical impressions determine the growth of plants, we should expect to find that gravitation is in this instance the influential cause, or that the growth of the radicle necessarily follows the direction of a mechanical force or tendency to motion, while that of the plumule goes against it. Mr. Knight ascertained this solution to be just, by experiments, in which another force was made to supersede, or to co-operate with, that of gravity. Seeds of the garden bean, which had been previously soaked in water, were

attached at short distances along the circumference of a vertical wheel, which was made to perform more than one hundred and fifty revolutions in a minute. In a few days the seeds began to germinate. In their growth, the plumule of each tended towards the axis of the wheel, the radicle in the contrary direction. In this case, owing to the vertical rotation of the wheel, the influence of gravity is neutralised; in its place a centrifugal force was substituted, by which the growing seed was influenced exactly as before by gravity.

In another experiment, beans similarly prepared were attached to the circumference of an horizontal wheel, which was then set in rapid motion; the result was not less conclusive than in the former instance; the plumule of each seed was observed to grow in a direction upwards and inwards, which the radicle tended downwards and outwards, that is to say, in the diagonal the two forces, by both of which, according to the hypothesis, it should have been blindly influenced. From these and similar instances, it appears reasonable to conclude, that the vital endowments are limited to two; namely irritability, and some modification of chemical affinity. What an innumerable interval between their mode of existence and that of animals!

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. BOLBOPHYLLUM COCOINUM. *The Cocoa nut Bolbophyllum.*

[*Bot. Reg.* 1964.

ORCHIDACEA. GYNANDRIA MONOANDRIA.

This species of Orchidæ was introduced into this country from Sierra Leone by Messrs. Lodiges. It was discovered upon the Cocoa-nut Palm, It has bloomed in the collections of Messrs. Lodiges, and Mr. Bateman a Knypersley. The petals are very narrow, serrated, of a pale flesh colour. The flowers are produced on a spike about six inches long.

2. CHRYSOSTEMA TRIPTERIS. *Three-leaved.*

[*Bot. Mag.* 3583.

SYNONYM. COREOPSIS TRIPTERIS. COMPOSITE. SYNGENESIA FRUSTRANEA.

This plant is an old inhabitant of this country, but not generally to be met with. It is nevertheless very ornamental for the flower border. It grows to about two feet high, blooms profusely. The flowers are of a light lively golden colour, having a purple disk. They continue in bloom from July to the end of the season. The plant may be procured at the public nursery and floral establishments. *Chrysostema*, from *chryso* gold; and *stemma*, a crown; referring to the colour of the flowers.

3. EPIDENDRUM NOCTURNUM; *var. latifolium*

[*Bot. Reg.* 1961

BROAD-LEAVED NIGHT SMELLING EPIDENDRUM. ORCHIDACEA. GYNANDRIA MONANDRIA.

The present variety has larger flowers than the original species, as well as the general habit of the plant being more robust. It has bloomed in the collection of the Duke of Devonshire at Chatsworth. The blossoms are highly fragrant at night. The sepals are of a greenish yellow, and the labellum of a yellowish white.

4. ENCHARDIUM CONCINNUM. *Neat.*

[*Bot. Reg.* 1962.

ONOGRARIA. TETRANDRIA. MONOGYNIA.

This annual plant bears some resemblance to the *Clarkia pulchella*, but not so handsome. It is, however, a neat and pretty flowering plant. The

VOL. V.

X

flowers are not quite so large as the *Clarkia*, of a rosy-purple colour. It is a native of New California. *Euchardium* from *eucharis* in the sense of agreeable, in allusion to the appearance of the plant.

5. PAVETTIA CAFFRA. *South African Pavetta*. [Bot. Mag. 3:80.

RUBIACEÆ. TETRANDRIA, MONOGYNIA SYNONYM. IXORA CAFFRA

A native of South Africa. The plants bloom very profusely. The flowers are white, produced similar to the well known *Ixora coccinea*. It deserves a place in every collection of hot-house plants. *Pavetta*, the name of the plant in the Malabar language.

6. PLATYSTEMON CALIFORNICUM. *The Californian* [Bot. Mag. 3579

PAPAVERACEÆ. POLYANDRIA POLYGYNIA.

This neat little annual was sent from California by the late Mr. Douglas. The plant grows six or eight inches high, producing a profusion of flowers a good deal like the Wild Wood Anemone of this country, they are of a yellowish-white, *Platystemon*, from *platus* broad, and *stemon* a stamen, alluding to the breadth of the filaments.

7. REHMANNIA CHINENSIS, *The Chinese*. [Bot. Reg. 1960.

SCROPHULARIACEÆ. DIDYNAMIA, ANGIOSPERMIA. SYNONYM. DIGITALIS GLUTINOSA. GERARDIA GLUTINOSA.

The plant is nearly hardy, but succeeds best if kept in a cool greenhouse. It is a native of North China. The flowers resemble the Foxglove, but not so large. The limb is a dingy orange-yellow, and the tubular part is of a brown-purple.

8. RHODODENDRON PHCENICEUM, *variety Splendens*.

[Brit. Flow. Gard. 385.

This very fine variety has been raised by the impregnation of *Rhododendron phœniceum*, with *R. Catawbiense*. Mr. Wood, Gardener to Mrs. May, of Sydenham, has been the successful raiser of this splendid flowering plant. It blooms profusely, and the flowers being very large are showy; they are of a rich red-purple, spotted with darker colour. It will be a very ornamental plant for the greenhouse or conservatory, and deserves a place in every collection.

9. SCHIZOPETALON WALKERII. *Mr. Walker's*. [Brit. Flow. Gard. 387.

CRUSIFERA. TETRADYNAMIA SILIQUOSA.

A very singular flowering hardy annual, growing nearly a foot high, each branch terminating with white fragrant blossoms of a very curious cut form, producing a striking appearance. The pure white of the flowers, their singular form, and powerful fragrance at night, strongly recommend the plant to every flower garden. It is better to raise the plants in pots and transplant them, than sow in the open ground. Seeds may be obtained of the London Seedsmen. See the lists advertised in the Cabinet during the past spring months. *Schizopetalon* from *schizo*, to cut; and *petalon*, a petal, referring to the flowers.

10. WIGANEIA CARACASANA. *Coraceus Wigandia*. [Bot. Reg. 1966.

HYDROLEACEÆ PENTANDRIA DIGYNIA.

A very neat and handsome flowering hot house shrub, growing six feet high. It has bloomed in the collection at the Duke of Northumberland's; the flowers are produced in profusion, in branching terminal clusters of three on each, the blossoms resemble some of the handsome *Solanums*, of a delicate

blac colour, which continue for a long time. It highly merits a place in every stove collection. *Wiganda* in compliment to John Wigand, a Bishop of Pomerania.

11. *SISYRINCHIUM GRANDIFLORUM*, *Large flowered*. [Brit. Flow. Gard. 388.

IRIDEE. MONADELPHIA TRIANDRIA.

The late Mr. Douglas sent this plant from the North West of America, near Columbia. It very far surpasses any other of the genus, in the size, as well as colour of its blossoms, which are of a rich purple colour, and produced in vast profusion. The flower stems grow to about nine inches high. It is cultivated in the rich collection of Mrs. Marryatt, at Wimbledon. The name of the plant originated from pigs being fond of the roots. From *rus*, a pig; and *rugchos*, a snout.

12. *AZALEA SEYMOURI*, *Seymour's Azalea*. [Bot. Reg. 1975.

This variety was raised some years since at the Hon. and Rev. W. Herberts, Spoforth, near Wetherby, Yorkshire. It had been raised from the seed of *Rhodora Canadensis*, the flowers of which had been impregnated with those of *Azalea Pontica*. The habit of the *Rhodora* is, that, the blossoms expand long before any foliage is produced, but the hybrid here noticed first pushed forth its foliage long before the flowers appeared. They are of a pale yellow colour, in form like the *azalea Pontica* but much less in size.

13. *BOLBOPHYLLUM SALTATORIUM*, *Dancing Bolbophyllum*.

[Bot. Reg. 1970,

GYNANDRIA MONANDRIA. ORCHIDACEE.

Messrs Loddiges's imported this species from Sierra Leone, and the plant has bloomed in their collection at Hackney.

14. *CALLIPRORA LUTEA*, *Yellow Flowered*.

[Bot. Mag. 3588

ASPHODELEE. HEXANDRIA MONOGYNIA.

The late Mr. Douglas found this pretty flowering bulbous plant in Northern California. It is found to flourish freely in the open border, in the warmer parts of this country. The flowers are produced in a scape upon a stalk six inches high. The blossoms are of a pretty yellow colour, which appear from June to August. *Calliprora* from *Calliprora*, pretty face; alluding to the beauty of the flowers.

15. *COREAPSIS LONGIPES*, *Long Stalked*.

[Bot. Mag. 3586.

COMPOSITE. SYNGENESIA FRUSTRANEA.

Mr. Drummond discovered this showy species in Texas, North America. It appears to be intermediate between *C. verticillata*, and *C. tinctoria*. It appears to be annual or biennial. The flowers are a fine yellow colour, not dark in the centre: each blossom is full two inches across.

16. *SPARTIUM ACUTIFOLIUM*, *Sharp-leaved Spanish broom*. [Bot. Reg. 1974

LEGUMINOSAE, DIADELPHIA DECANDRIA.

A probable variety of Spanish broom, the flowers are rather more lax than the original species. Seeds of it were sent from Turkey to the London Horticultural Society. It is a hardy shrub.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE CULTURE OF PRIMULUS, &c.—Will some of your obliging Contributors favour me with the best mode of cultivation; and soil, and treatment for the *Primula farinosa*, *longifolia*, *verticulata*, *cortusoides*, *minima*, and *integrifolia*.

Also, will you inform me where I can purchase *Convolvulus pentanthus*, and *Ipomoea Horsfollii*, good strong plants at a reasonable price.

Siratford, 10th May 1837.

[We have the latter plant at Downham Nursery, at a low price.—COND.]

REMARKS.

GAILLARDIA PICTA.—This very beautiful flowering plant, deserves a place in every flower garden, or greenhouse. Its very showy blossoms, produced in such profusion, render it a valuable acquisition.

MIMULUS HODSONII, a fine flowering variety, has been raised between *M. roseas*; and *M. cardinalis*. It has the habit of the latter, and the blossom of the former, being of a fine rose colour, but a superior shape to the flower of the original roses. It has been named *M. Hodsonii* in compliment to the superabundant of the Bury St. Edmund Botanic Garden. It has bloomed in the garden at that place.

MIMULUS CLAPTONIA.—A new variety raised by Mr. Law of the Clapton Nursery, between *M. variegatus* and *M. cardinalis*. The plant has the habit of the latter, and the flowers of the former, but of a deeper colour.

CLIANTHUS PUNICEUS.—We have seen many of this beautiful flowering plant, succeed admirably, trained against a south aspect wall, and against a trellis on a south border. In both situations the plants bloomed freely, and are protected by mats or reeds in winter. If turned in the open ground in summer, and be taken up for winter, it does well—Use a rich soil.

SOLANUM HERBERTIA.—This hothouse species now blooms; its fine blue flowers produce a beautiful appearance. It is the handsomest of the species we have seen, and well deserves a place in the plant stove. Mr. Young of Epsom has plants of it in bloom.

DEUTZIA SCABRA.—This handsome shrubby plant has produced its lovely white blossoms so profusely, as to strike the attention of all who have seen it in bloom. The racemes of blossoms being much like a syringe in miniature, or resembling the *andromeda pulverleata*, or *floribunda*. The beauty of a large bush of it, is beyond description; the plant being so cheap, of easy culture, and growing very freely, well deserves a place in every shrub border or greenhouse. It blooms admirably well when placed in a room.

MIMOSA PROSTRATA.—This plant is admirably adapted for training around a wire trellis. Such as we noticed early this year in the Cabinet. Its long branches throwing out a great number of lateral shoots, which hang pendant

and produce a profusion of delicate lilac pink blossom, hanging in clusters. Being cheap and of easy culture, it deserves a place in every greenhouse, or to stand upon a lawn, or to train up a pillar, or against a trellis, &c.

ON THE COLCHICUM, ORCHIS, &c.—The single and the double Colchicums are beautiful, and give variety to our gardens at a late season. The popular belief, that the fruit or seed of Colchicum is produced previously to the flower, is wholly unfounded; and, as the peculiarity in the appearance of fructification of this plant, generally excite the curiosity of Florists. The orchis mascula, which from the rich purple of its petals, and dark-spotted leaves, merits a place among our cultivated flowers are rarely seen in gardens, it being generally supposed that there is some peculiar difficulty in removing the roots of this curious tribe of plants from their native situations of growth. I have in a former work hazarded the conjecture, that the Orchis, in removal, did not require different treatment from that necessary to be given to all bulbous plants under the same circumstances; and I have since confirmed the justness of this conjecture by experiment.

It is requisite that the leaves of all bulbous plants should be wholly decayed before their roots are transplanted, as, until the change has taken place, the process of growth in the annual renewal of the bulb continues in progress, and the growth of this new bulb is checked by any injury which the leaves of the old bulb may sustain. Nevertheless, as it is frequently expedient to remove bulbous plants while their leaves are green, and even during the time in which they are in flower, this may be safely effected, if done with proper precaution, and also the root may be preserved in a healthy state, although it will certainly be weakened. All bulbs, if transplanted while their leaves are in vigour, should be removed with as much soil as will adhere to the bulbs, and great care must be taken not to cut or bruise the root, or the root-fibres. When transplanted, their leaves should be carefully tied to a stick, and suffered to remain until they naturally fall from the plant. If bulbous plants, during their state of vigorous foliage, are sent to a distance, they should have the same attention given them, and the soil should be closely pressed round the bulbs, and their leaves nicely tied together, and the whole wrapped in sheet lead, which, by keeping them from the air, will prevent the evaporation of their juices, and preserve them for a week or ten days nearly as well as if they were placed in soil for that period.

We find the Orchis kind characterised as bearing two distinct bulbs, and the difficulty of removing any of the species from the fields into our gardens ascribed to some peculiarity in the plant. Also the rare circumstance of the autumnal Colchicum not ripening its seeds until the spring after their formation in the preceding autumn, has given rise to an unwarranted opinion that the fruit is produced previously to the expansion of the flower, and which, from want of a little farther investigation, has become an established popular belief.

I am desirous to rouse my sister florists to the exertion of seeing for themselves; and by shewing with how little trouble the errors mentioned above may be confuted, I hope to excite them not to acquiescence in the belief of any extraordinary fact, until they have examined the foundation on which it rests. I have annexed some representations of the bulb of the large purple Orchis mascula, which will fully refute the belief which obtains of that order of plants bearing double bulbs, and will also exhibit the extraordinary change which takes place in the form of the bulb from its early state of growth to the time it has attained perfect maturity; and respecting the difficulty of removal, I can aver from experience, that there will not be found any circumstance necessary to be regarded, but what occurs in the transplantation of all other bulbous flowers during the periods of their growth; and as the large purple Orchis will be found peculiarly ornamental in the borders of the mingled flower-garden, our trouble in bringing it thither will be well repaid.

As this Orchis is usually found growing in hay meadows, and the leaves having generally disappeared before the grass is cut, it is commonly expedient that it should be transplanted in a state of active growth, and I should recommend the removal of the plant to take place as early in the spring as its beautifully spotted leaves have attained about half their size; when, if it be taken up with a clod of earth completely enveloping the root, and carefully shaded, and occasionally watered, it will rarely fail of producing a vigorous flowering bulb the ensuing year, and might probably bloom the year of removal; but in order to strengthen the root, it will be better to pinch off the flower-stem as soon as it appears, as during the time of flowering a large portion of nourishment is drawn by the fructification from the old root, and consequently the newly forming bulb is robbed of its due share of sustenance.

FLORIST'S MANUAL.

LONDON HORTICULTURAL SOCIETY.

EXHIBITED AT THE ROOMS IN REGENT STREET.

July 4.—H. M. DYER, Esq. V. P. in the chair. Several presents were announced, but none were of particular importance. No papers were read, and the attendance was not numerous.

Mrs. Lawrence exhibited an extensive collection of plants. The most prominent object was *Brugmansia bicolor lutea*, a yellow variety, like the old *Datura arborea*, and narcoti, being used by the Mexican priests of Guatamala in the religious rites. The other plants was a beautiful specimen of *Gesneria facialis*; a superb tray of *Geraniums*; *Polygala cordifolia*, *Camphylia tricolor* and a new species; a new white *Agapanthus*, *Pimelia decussata*, *Gesneria splendens*, *Lechenaltia oblata*, two species of *Polygala Bracolata*, *Pimella Rosea*, and a tray of heartsease. The large silver medal was awarded for the collection.

Mr. Leveson Gower exhibited several double yellow Roses of great beauty. The growth of this rose is very uncertain, and its cultivation very difficult, as there is no plan to make the flower grow, it appearing as it could only be developed in certain places. The silver Banksian medal was awarded for the same. Mr. Slater exhibited a collection of Irises and Roses, Mr. Hooker, of Breckley, a very extensive variety of roses, and Messrs. Colley and Hill a very handsome collection of *Pelargoniums*.

Mr. Fairbairn exhibited five varieties of *Erica Ventricosas* named as follows:—*E. V. fragrans coccinea*, *E. V. superba*, *E. V. coccinea*, *E. V. fragrans*, and *E. sellata*, as also a curious plant *Erica Giraphaloides*. A silver Knightian medal was awarded. Mr. Bateman exhibited *Cychnoches ventricosum*, a curious orchideous plant, the flowers growing naturally pendant in a swan-like form, and *Stanhopea oculata*, the flowers of which were curved like the horn of an ox, having marks on the lips resembling eyes. The odour was somewhat that of concentrated Vanilla, which in a hothouse was very oppressive. For these the Knightian medal was awarded. Mrs. Marryatt exhibited a new Cape Bulb, grown under the protection of a frame, and a cut specimen of a new solanum.

Mr. Charlwood exhibited a part of an interesting and extensive collection of Cactaceous and Orchideous plants, collected by M. Deschamps, during a residence of seventeen years in Mexico. The appearance of many were extremely unlike any that had been previously seen, and they exhibited the effect of cultivation, it being a matter of taste which were most to be admired.

The flowers from the gardens of the society were *Clinton elegans*, a pale flower, and better than the *C. pulchella*, the flowers being in better perfection about a fortnight ago. *Penstemon venustus*, a hardy plant, brought by Mr. Douglas from north west America, easily cultivated, and one of the most beautiful of the species; *Æthionema Membranacea*, a plant well suited for a rock or dry places; *Ceanothus azureus albus*, a graceful white flower; *Euto viscida*, a plant just beginning to be known, bearing beautiful blue flowers

only to be rivalled by the *Larkspur*, hardy in the gardens, and easy of cultivation, and possessing the quality of living longer in water than any other cut flower; *Lychnis bungeana*, a hardy plant growing in the open air, from Russia, and the north of China, and *Antholyza grandiflora*, a beautiful bulb but not sufficiently known, the plant having grown in an open pit for several years without heat, and merely protected by a frame. The remaining flowers consisted of garden and China Roses; *Solanum asperolanatum*; *Crinum Amabile*, *Quisqualis Indica*, *Combretum purpureum*, *Alstromeria pulchella*, *Fuchsia discolor*, *Lupinus nanus*, *Collisinia bicolor*, *Oxyum Chrysanthemoides*, *Gilia Achilæfolia*, *Hocksakia Sp.*, *Eriophyllum cæspitosum*, and *Sedum azureum*.

FIFTH EXHIBITION(PUBLIC) OF THE METROPOLITAN SOCIETY OF FLORISTS AND AMATEURS.—August 24th.

DAHLIAS.—Best collection with name attached, no limit and open to all classes, gold Adelaide Medal, value 7l. 10s. Best fifty dissimilar blooms, by nurserymen and others, King William and Adelaide Medal, and small medals to all others the judges may think worthy, not exceeding one half of the stands exhibited. Best twenty-four in stands of the society similar prizes.

Best twenty-four amateur members, ditto. Best twelve amateur members growing under two hundred plants, ditto.

No amateur to exhibit in both classes.

SEEDLINGS.—As the amateurs appoint judges from the dealers, and the dealers appoint judges from the amateurs, the Committee will instruct such judges to select from the seedlings exhibited all flowers of first-rate quality without limit, and none other, for prizes, which will, in such cases, be the small Adelaide medal. The Committee will afterwards appoint competent persons to report to them whether any one or more of such flowers shall deserve a higher distinction, which the Committee hold themselves in readiness to award, even up to the gold medals, should they seem worthy of such distinction.

ROSES.—Collections of fifty bunches, for all classes, and twelve bunches for amateurs. Prizes and entries as in April.

FLOWERING PLANTS.—The best collection of any kind without limit. Large King William Medal, Adelaide Medal, and small ditto.

Entrance—Stands of Dahlias or seedlings, each 1s.; non-member's stands, 5s.; seedlings, 5s.

Notice of showing to be given on before the first Tuesday in August.

GRAND SALT-HILL ANNIVERSARY, SEPT. 2.

DAHLIAS.—One hundred blooms, dealers, gold medal, value £7. 10s.; one large medal, £3.; one Adelaide Medal, 30s.; small medals, 15s. to make up two-thirds of the number exhibited. Twenty-four blooms, dealers, similar prizes. Fifty blooms, amateurs or their gardeners, similar prizes. Twenty-four blooms, ditto similar prizes. Twelve blooms, amateurs growing under two-hundred plants, large medal, Adelaide Medal, and small medals to make up the number to two-thirds of the stands exhibited.

SEEDLINGS AS IN AUGUST.

ENTRANCE—Members, 5s.; non-members, 10s. Seedlings—Members, 2s. 6d.; non-members, 5s.

Notice to be given on or before the first Tuesday in September.

Persons who win several medals in one day, or during the season, may add their value together, and have the amount in larger medals, or either of the gold medals.

At the conclusion of every show, an order for the medals, or the stipulated reduced sum of money, is to be delivered to the winners.

Circulars to the above effect were ordered to be forwarded to the members.

It was determined that, at their evening meetings, on the 1st and 3d Tuesday in every month, the Committee would distribute prizes for any production of extraordinary rarity or merit which shall be exhibited; such productions to be placed in the room before six o'clock; and such members of the Committee, as may be assembled within the committee-room, should after viewing the productions, retire again to their room to decide if any, and what rewards should be given. The chair to be taken, at the evenings meetings, at seven o'clock, when the prizes awarded should be delivered.

FLORICULTURAL CALENDAR FOR AUGUST.

GREENHOUSE PLANTS.—All exotic trees and shrubs belonging to this department, that are in want of large pots, or refreshment of new soil, should (if not performed last month) be immediately done. This is the proper time to propagate Aloes Sedums, and all others of a succulent nature, by means of suckers or bottom offsets; when detached from the parent, they should be potted singly into small pots, using light dry compost, and watering sparingly till they have taken root. Azaleas, the greenhouse kinds, will have firm young wood, insert them firmly in sand, and cover with a bell-glass. In the first or second week at farthest, innoculation may be performed on any kinds of the Citrus genus. Camellias to bloom early, should be put in a warm stove or greenhouse.

FLOWER GARDEN.—Due care must be taken respecting watering any kinds of annual, biennial, or perennial plants, that may be in pots. Propagate by means of slips, and parting the roots, of any double-flowered and other desirable fibrous-rooted perennial plants done flowering. Likewise increase by offsets the different kinds of Saxifrage. Auriculas should be cleared of all dead leaves, and shifted into fresh pots; prick out of the seed-bed seedling Auriculas and Polyanthuses, in a shady situation: seeds of both kinds may also be sown in boxes or pans. Carnations may still be layered, also Sweet-williams, the earlier in the month the better. Also plant out pink pipings, which were put in June. Sow seeds of all kinds of bulbous rooted plants in pans or boxes, such as spring Cyclamen, Anemonies, Ranunculuses, &c. &c. Those kind of bulbs wanted to increase should be taken up, if the leaves be decayed, and the offsets taken off. Transplant into nursery beds seedling, perennial, and biennial plants sown in spring. In dry weather gather those flower-seeds that are ripe of any desired kinds of autumn flowering bulbs that yet remain unplanted.

Mignonette to stand the winter in pots, should be sown early in the month, have no fresh dung in the soil. Rose trees may still be budded. Double Rockets out of flower, should have the stems cut down, to cause new shoots to push, or the shoots in general, die. Calceolarias intended for late blooming should have the branches cut down, and be re-potted, or take off and pot offsets.

REFERENCE TO PLATE.

The very beautiful *Ranunculus* we give in this month's plate are seedlings raised by Messrs. Tyso and son, Wallingford, Yorkshire, and cannot be but much admired for their superior properties, we hope Messrs. Tyso and Son will be amply rewarded for their trouble.

No. 1. DIADEM.
No. 2. GOVENOR.

No. 3. ADOLPHUS.
No. 4. VICTORIA.



Adelaide d'Orleans Rose

Anagallis lilacina

THE FLORICULTURAL CABINET,

SEPTEMBER 1ST, 1837.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

FURTHER REMARKS ON THE CULTURE OF THE TREE ROSE.

BY ROSA.

THE increasing number of splendid varieties of the much esteemed family of Roses, and their admission into every flower garden, and pleasure ground, being a desideratum, induces me again to resume the subject of their culture as standards. During the present summer I have been much struck with the increasing taste for their culture on lawns, and to exhibit their splendid heads in the centre of a flower bed, or back part of a border.

In remarking on the growth of a tree rose, I must observe that the rings round the bottom of both stem and branches are the depositaries of a dormant bud, which will not be called into action unless the buds above be injured, or unless the sap arise so profusely as to be unable to expend itself by the upper part in which case the buds below break out; though, indeed, they will occasionally do so, as the natural act of the tree in preference to rising higher. This is more observable in the wild rose than almost any other plant, and perhaps may, in some degree, explain the reason why budded roses are shorter lived than those on their own bottom; for any one who has at all observed the growth of wild stocks, must have noticed that the original head is seen

generally on hedges in much worse plight than the shoots which have been subsequently formed at its base. This tendency of the dog-rose to break out below, must be checked in two ways ; the first, by destroying every sucker and shoot as it starts, and the second, by finding full work for the sap above, and by giving it a free passage.

If then, in cutting the top of a tree at pruning time, you leave a couple of buds on every shoot of last year's growth, or three at most upon a very strong one, there will be quite enough to occupy the sap, keep the tree within bounds, make it much handsomer, save the sap the expence of maintaining old wood, and give it a free course. If there be more sap than enough, a fresh shoot will likely enough start from the crown of the graft, or the rings upon the first year's shoot, and increase the head of the tree, as well as bring you back with new wood nearer home—a matter always desirable as tending to keep the head from straggling.

Cutting to the lowest buds always leaves the sap with but a short channel to pass through, strengthens the branch below the buds, and is every way beneficial, if care be taken that a sufficiency be left to occupy the sap.

If the tree be not pruned at all, it will lose its shape entirely in a single year, afford little or no bloom the next, and eventually straggle to death.

Trimming the shoots has nothing essentially different in the manner of execution to trimming the stock ; in trimming to a bud, barely the thickness of a sixpence should be left above the bud, and the excision should form a slant about equal to that caused by dividing a square from angle to angle : if more were left above the bud, it would die down to the bud, and prevent the bark from healing over the wound ; in general, the line of the bud is the slant the knife should make it its passage through the shoot.

Cutting out old wood should always take place where it can ; the desirable point being to keep near home, as it is called ; when, therefore, your tree throws out a fresh and vigorous shoot, close to the base of an old branch which has straggled too far from the graft, cut out the old wood in March, close to its base, leaving the young shoot to supply its place, and receive its nourishment. This principle well applied, will always keep the trees in bounds ; but as this requires judgment, and cannot well be explained in

writing, take a lesson upon the subject, the first convenient opportunity, from a scientific gardener.

A tree well formed, with a promising head, and in health, ought, the spring succeeding the budding, to have a clean straight stem, no lumps or knots, one shoot quite at the summit, and two, or at all events, one other shoot as near as possible also to the top; if there are two shoots only, at opposite sides to each other; if three, forming a triangle, if more as nearly equidistant from each other, in the diameter of the stock as possible, (and here be it observed, that the more shoots, at the top of the tree, the handsomer and quicker is the head formed,) each with a bud inserted in it, close to the stem: and at the cross cut, where the bark of the bud usurps the place of the original bark of the stock, a sufficiency of sap ought to have exuded, not only to have joined the bark of the bud with the unmoved part of the bark above it, but also to have joined the separated part of the bark of the stock to the same place, and thus linked the two barks of bud and stock to the single bark of the stock above them.

The edges of the vertical slit in the bark do not heal by attaching themselves to each other, but the bark of the bud underneath them forms a connecting link, and the edges above mentioned perish insensibly away, leaving little or no scar behind. The second spring, the tree becomes more perfect, the extraneous parts of the stock, if any remain, are cut off, as well as those of the shoots, and the head so arranged as to throw its buds where they are wanted to make it round, even, and handsome. If, however some shoot be obstinately bent on growing in any direction, spoiling the appearance, and crossing the others, by no means remove it on that account alone, but place a little twig across from it to any other convenient branch, and confine it for the season as you wish it to be, removing the ligature in the succeeding spring, or even in the same autumn when the sap is down.

Lastly, the third spring the tree should show itself with all its wounds nearly closed, its buds strong, full, and healthy, and it should look perfectly natural, those parts of the shoots upon which the buds were placed more incorporated with the stock. The bark clean, no dead wood; and wherever a shoot has been shortened, the place so grown over as to leave no dis-sight, which will be the case for some time wherever any wood more than one season old is cut away, and a thin shoot of a single year

springs at the end of it. This is the reason why forest trees look so ill when shortened as old ones, viz. that the taper appearance is destroyed, and wood of five or six years' growth is continued by the shoot of a single spring, and thus a piece of wood, of the diameter of half a dozen inches, has a little mean looking shoot, or in all probability half a dozen, not thicker than horsewhips, at the end of it.

Whatever it is worth while to do, it is worth while to do well; work properly commenced does not require that constant superintendence which a bad beginning is certain to render necessary, and which eventually involves a much greater expenditure of time than any labour bestowed at the outset could have demanded.

Having thus brought our subject to a close, as to the operative part, in preparing and perfecting the tree, it may not be amiss to spend a few moments in the consideration of the effect expected to be produced by it when planted out.

There are three causes of beauty in a tree, shape, foliage, and flowers. Shape (to a certain degree) we artificially gain, foliage and flowers must depend upon the sort; the foliage is the more permanent, the flower the more striking. Planting out, then, must depend entirely upon the effect desired, and the taste of the party planting, as to variety of foliage, height, flower, its colour and continuity; a tree with rambling shoots suits one place, and with a cauliflower head another. The tree roses never look well in a round clump; they must have a single appearance, or be in some sort of line.

If your roses are to look, when finished, like a sloping bank, plant your heights in succession, viz. each under each; but if they are to have a less forced and regular appearance, and a more single and light look, leave out an intermediate height, as thus: a two-feet in front of a three-feet, &c.

Be it observed, that a three to four foot standard is most in keeping with the head it carries, and being nearer the ground, has a very natural and steady effect, and in confined places, it is unquestionably best in its appearance; but if the tree is to be distant from the eye, or the shrubbery, or walk be large and increasing indistance, a four-foot standard is certainly more distinguishable, and has a much greater effect.

A foot standard is of little or no use, except it be intended to approach the edge of a border, or is grafted for the conveni-

ence of affording nosegays or increasing the quantity of the plant placed upon it.

The heights most in use having been shown, it may be remarked, that for a weeping rose to stand singly, (perhaps surrounded with a wire guard and creepers upon it to have a more marked effect,) you cannot find a stem too high, if it be proportionally strong. A fine plant of this sort, six, seven, or even eight feet high, budded with a noisette, or boursalt, looks beautiful, and its long free branches, covered with clusters of roses, have a wild and luxuriant appearance, which give a distinct character to a tree budded in this way.

Thus having arranged where the plants are to be, and having made the earth good all around, stake up each tree with a neat, clean hazel stake, (unless the stock be so strong as not to require it,) saw off the top level with the top of the wild stem exactly, a matter that conveys a great air of neatness, and with a piece of bass, or better a small strip of pitched rope, attach your tree to the stake.

ARTICLE II.

A LIST AND DESCRIPTION OF CARNATIONS,

BY PENSEE,

(*Continued from p. 132.*)

PICCOTEES.

WOOD'S AGRIPPINA. (*purple.*)

I BEFORE alluded to this flower, which I designated "The Prince of Piccotees, I therefore give it first place in my remarks. It is a model by which I would recommend judgment to be formed. The leaf, a beautiful white, is perfectly round, or what is termed rose-leaved, is delicately edged with a brilliant purple, so equally distributed, that Nature's best artist seems to have been employed on the work, and so well has he performed it, that I trust he is at the present time most busily employed on a seed bed of mine, now coming into bloom; though I imagine, from the number and goodness of the flowers raised by Wood, that he keeps this first rate artist in his constant employ.

JEEVES'S MOON RAKER (*purple.*)

Is RATHER heavily edged, without being termed in the least degree pouncy, a fault often found in flowers of a similar character. The richest purple on a very clear and sparkling ground, gives a brilliancy rarely met with, but when found, should be prized as I know this flower must be by all who have grown it.

ROSALIE DE ROHAN. (*yellow.*)

Like chastity, which it is said, wipes off many sins, or imperfections in our nature; so does the strikingly beautiful colour in this flower, make amends for a most defective ragged petal; another property (and one most desirable to exhibitors) must be also thrown into the scale against the imperfect leaf, that of remaining in bloom for many days longer than any variety I am acquainted with. The colour is a bright pink, on a beautiful yellow ground; the plant throws plenty of grass and a good shaped pod. It requires but little protection in the winter, being hardier than most of the yellows.

PRINZ VON ORANIUM. (*yellow*)

I remember some time ago asking Hogg to name the best Picotee, he without hesitation replied, "The Prince of Orange." but as many new and fine varieties must have come under his observation since that time, I cannot say if he continues in the same opinion, not having had any conversation with the Veteran for some two years or more. I have thus lost much information which mixed up with these remarks, would have, perhaps, made them valuable to your readers. Notwithstanding the danger of offering an opinion against so good a judge; I cannot but say that I think the numerous small petals in the flower, to say nothing of the soundness of the pod (always so difficult to bloom) must place it far beneath the enviable situation given it by Hogg. I admit that the colour is very beautiful, and I think unique, and that the petal is perfect in shape. I recommend each plant to be allowed to bloom two pods, or difficulty will be found in preventing it from bursting.

WOOD'S CHAMPION. (*red*)

Should be in every collection, and it is certainly no fault of the plant that it is not, for it, constantly throws as much grass,

as ought to intimidate every monopolizer of hay in these dear times. The plant is dwarf, the pod well formed, requiring but little attention to bloom it, the shape of the flower is excellent, the white very fine, but the red rather dull, yet even with this imperfection I think it would be difficult to find a better red Piccotee.

WOOD'S COMET. (*red.*)

To describe this flower, would be repeating all I have said of the Champion, they resemble each other so much, I doubt if Wood himself can find a difference. One may be said to be the Dromio of Ephesus, the other Dromio of Syracuse resembling each other so much, that one often got bastinadoed for the other's faults.

PENSEE.

To be continued.

ARTICLE III.

ON THE PROPAGATION OF HALF HARDY AND SOFT WOODED GREENHOUSE PLANTS.

BY MR. W. H. ST. CLAIR, OAK PARK, GALLOWAY.

In a former paper I detailed the method practised by Mr. M. Phail, in propagating pinks. At that time I did not wish to occupy too much of your pages in one article, I beg now to subjoin a few more remarks on the method in question; for some years past I have entirely discontinued the use of hand glasses in propagating any soft wooded greenhouse, or half hardy plants, that have fallen under my charge, and, except when I have occasion to propagate early in the spring, I find Mr. Phail's method is a far surer mode of propagating, than by using hand glasses, or giving cuttings the "gentle bottom heat" so highly recommended by some. In propagating cuttings under a hand glass, a shady situation is generally selected, and great care is taken to keep off the sun's rays from affording the least heat to them; this is easily done, for a more unfit form for raising heat; than a hand glass has, cannot be well imagined; it never occurs to the person who uses them in propagating soft wooded plants, that a volume of cold moist air is not as good for raising cuttings as one fourth the same quantity of moist heated air, is; in like manner, in propagating under frames, the sun's services are almost entirely dispensed

with, a bottom heat substituted, in place of them; in Mr. Phail's method, cuttings are forced in a comparatively short time to send out roots, and though a few cloudy days together may seem to argue against it, no bad effect, from such a cause, has ever fallen under my notice. In selecting cuttings for this mode of culture, I use only young, or at most half ripened cuttings, detaching them with the hand from the parent plant when practicable, and after trimming off a few of the large leaves, I insert the heel, or lower joint of the cutting; I give the frame a full south aspect, and raise it a few inches as directed for pinks; I allow only two or three inches between the top of the cuttings and the glass, and give them no air till they have given evident proofs of their having struck root, I shade the sash with several folds of net, pieces of paper, or a thin mat, removing it between four or five in the afternoon; on giving a good watering at planting I find very little more suffices them for the first fortnight, owing to the sash being kept close down; when rooted, I increase the air gradually. I have used frames of all sizes, from one of six inches by nine, to one of six feet in length, and except that I find it more difficult to equalize the temperature in a small frame, I find little difference in the success of the cuttings. I must add, however, that a large sash requires the shading to be a little closer than a small one. If a mixed collection of cuttings is to be put into the same frame, they should consist of such as require about the same time to strike root, and by mixing up a compost of light loam, vegetable mould, or peat and sand, under the treatment detailed above, a good many kinds may be propagated in the same frame.

Before concluding, I beg leave to enumerate a few of such sorts as yield most readily to this mode of treatment, and such as I have propagated for the last three years. Pinks, Carnations, Geraniums, (tricolor included,) Sollyas, Myrtles, Cistuses, Calceolarias shrubby and herbaceous, Fuchsias, Pansies, Salvias, Verbenas, Lophospermums, Petunias, &c., from the certainty and facility, with which the above and many other plants of similar habits may be propagated, I have no hesitation in recommending the method to any of your readers who may feel inclined to try it, and I have every reason to think, if they try it once with cuttings, and subject those cuttings when potted, to similar treatment for about ten days, they will be induced to try the same method again.

WM. ST. CLAIR,

ON STRIKING AND SUBSEQUENT CULTURE OF THE ORANGE,
AND CITRON.

BY MR. W. WHALE, ELCOT PARK, NEWSBURY, BERKSHIRE.

I BEG leave to communicate to you my mode of cultivating the Orange and Citron, which I have practised for many years with great success, which may be of service to some of your subscribers—that is from single eyes with a leaf attached to it; I immerse the eye in the mould about half an inch deep, and they begin to make roots very soon, sending up a strong shoot at the same time. I have stuck fifty to a hundred in a large sized pot, and scarce one of them failed, and of course a plant on its own bottom is preferable to a plant introduced on another stock. When potted, they should be watered liberally, and introduced into dung heat and shaded. I find they strike most readily in a cucumber bed, the pots plunged to their rims. The compost I generally use is rich loam and rotten dung, the pots well-drained, and about three inches of soot at the bottom of the pot, if a little old mortar, so much the better. I also find the Dahlia strike very freely from single eyes, and much the best mode for summer propagation when you wish to propagate valuable seedlings, as they make strong plants by autumn. I also find *Bigonias* strike freely by the same method. If you think this worthy of a place in your Cabinet, you are at liberty to publish it.

W. WHALE.

ARTICLE V.

ON PROPAGATING EVERGREENS.

BY *PRIMULUS SCOTICA*.

I HAVE lately observed a method most successfully practised by a friend of mine in Argyleshire, which is not, I think, sufficiently known. He plants in an oval or circular space, prepared as usual, as many shoots of the year's growth as it will hold closely placed; he fences the plot with brushwood, and never thins them. In three or four years the shoots unite into an extended and beautiful bush, and in two years they are an ornament to the woods and shrubberies.

My friend has some fine old Laurels, with bare and unsightly

stems, he has planted round them, at the distance of a foot or more, a number of these shoots, and the effect is extremely good, as they soon unite with the old bush, and continue its dark foliage down to the ground. This plan answers best with the Laurel and Laurestinus.

PRIMULA SCOTICA.

ARTICLE VI.

A DESCRIPTION OF THE *MIMULUS CARDINALIS COCCINEA*, &c.

BY MR. BARRATT.

WHEN the above plant figured in your interesting Work, it was an object of universal admiration, consequently it was much in demand, but when the plants thus purchased flowered, there was a general disappointment, it proved a dingy bad spotted red, and thus the plant fell into great disrepute, indeed the very mention of the name, seemed to excite disgust. However, happening last year somewhere to see a plant in bloom which very nearly answered the colour (not exactly the shape) of the one you figured, I purchased it under the name of *Mimulus Cardinalis coccinea*, it is now in full bloom, several stems near six feet high, covered with splendid scarlet blossoms, six or seven hundred at least; it has been greatly admired, and I think, has removed the existing disgust, from the minds of all who have seen it. I think I never saw a more splendid plant, and at the same time emitting a most delightful musky fragrance, and appears to me to be a very desirable plant. Since purchasing the above plant I have got another variety which I call *M. Car. picta*, the ground colour is the same as the *M. C. coccinea*, with a large dark spot in the centre of the flower, about the size of a shilling; this also promises to be a very desirable plant, either for early forcing in a greenhouse, or for flower borders in summer. I should not have ventured to trouble you with this account, but I really think, such showy plants so cheap (see Advertisement in the Cabinet for June 1837), and so easy of cultivation, that is, grow it in a rich soil, and supply it with plenty of water, in rather a shady situation: it would really be a matter of deep regret should such plants not be grown in almost every garden in the Kingdom.

W. BARRATT.

ARTICLE VII.

ON WATER AND WATERING PLANTS,

EXTRACTED FROM AN OLD AUTHOR BY CLERICUS.

THE subject of water, or watering plants has not been as sufficiently examined into as it merits. I am convinced that a great deal of ignorance is displayed in the practice of giving water to plants, both as to its quality and quantity. I have recently met with some useful observations on these matters in a Gardening Book, near two hundred years old, and confident that they would be serviceable to the readers of the Cabinet, I have transcribed them for insertion therein. The Author observes,

"Water is one of the most considerable requisites belonging to a garden : if a garden be without it, it brings a certain mortality upon whatsoever is planted. By waterings the great droughts in summer are allayed, which would infallibly burn up most plants, had we not the help of water to qualify those excessive heats. Besides as to noble seats, the beauty that water will add, in making *Jet d'eau*s, canals and cascades, which are some of the noblest ornaments of a garden."

"Sir Isaac Newton defines water (when pure) to be a very fluid salt; volatile and void of all savour or taste; and it seems to consist of small, hard, porous, spherical particles, of equal diameters, and equal specific gravities; and also that there are between them, spaces so large, and ranged in such a manner, as to be pervious on all sides."

"Their smoothness accounts for their sliding easily over the surfaces of one another."

"Their sphericity keeps them from touching one another in more points than one; and by both these, their frictions in sliding over one another, is rendered the least possible."

"The hardness of them accounts for the incompressibility of water, when it is free from the intermixture of air."

"The porosity of water is so very great, that there is at least forty times as much space as matter in it; for water is nineteen times specifically lighter than gold, and of consequence rarer in the same proportion. But gold will (by pressure) let water pass through its pores; and therefore may be supposed to have (at least) more pores than solid parts."

"Mons. L'Clerk says, there are these things observable in water, which naturalists study to know and account for."

"It is transparent; because as some are of opinion, it consists

of flexible particles like ropes, which are not so close as to leave no Pores ; nor so entangled but that there are right lines enough to transmit the light."

"For since the particles are not joined close together, and are in perpetual motion, the very fine particles of light do easily pass through their right lines ; unless the water be very deep, or be put into motion, by some outward cause. Then indeed the transparency of water is very much obstructed, and it looks of a cloudy obscure colour, as it is obvious to sight in a rough sea : For at such a time, the vehement agitation of the water disturbs their pores, and spoils their straightness."

2. "Water is liquid, but capable of being fixed; water seems to be liquid for the same reason as other bodies are so. For since the particles of it are flexible, like ropes, and leave pores between one another, which are filled with finer matter, when this matter is put into a vehement commotion, the particles are easily tossed about every way ; yet when the motion of this restless matter is restrained as it is in winter, then the water congeals into ice ; whether this comes of cold only, or there be besides nitrous particles, which fall out of the air at that time, and with their rigidity fix the watery particles."

3. "It may be made hot or cold. The particles of water being, as has before been said, ice, is soon dissolved by the motion of the particles of fire : for the particles of fire, getting into the pores of the ice do mightily shake the fine, flexible particles of ice, and restore them to their former motion in a little time.

"But if this water be set in cold air, the fiery particles will quickly vanish, and the water will become as cold as before.

"4. Water easily evaporates by the heat of fire or air. This is because its particles are quickly separated, and got into motion ; so that the airy particles easily carry those of the water about with them.

"5. It is heavy if compared with air and other bodies, but much heavier than air. It has been shown by various experiments that the gravity of the air, in the place where we live is to that of water, as one to eight hundred, or something more ; so that water is about eight hundred times heavier than air. And for this reason, and for no other a bladder, or other thing filled with air, can hardly be sunk under water ; and indeed, to make air sink, there must be a weight added to it, that shall exceed the weight of the water, as much, and something more, than

that of the water exceeds that of the air. Hence it comes to pass, that water easily supports wood, and vast ships fraught with the heaviest cargo; for the weight alone will never sink them, unless the goods and the vessel should make up a weight which exceeds that of the water; and as salt water is heavier than fresh, so it bears greater weight.

“Those things which are heavier than water, as stones, metals, &c. when they are thrown into it, go straight down to the bottom; and as their weight is greater, by so much the quicker: while other bodies which are the same weight with the water, do neither float on the surface, nor sink quite down, but remain suspended between the top and bottom, as is seen in the carcasses of animals.

“6. Water is insipid and without smell. The reason is, because its flexible parts slip gently over the tongue, and are not sharp enough to prick the nerves and affect the taste: but this is to be understood of pure water, void of all kind of salt; such as distilled water is, and next that of rain: for the most wholesome fountain water commonly derives a saltiness from the earth; though in this place is not meant medicinal fountain water, the taste of which is more acute, but such water as is usually drank.

“And that it is without smell. The purer any water is, the less smell it has; for the reason why the particles do not prick the tongue is likewise the reason why they don't affect the smell; the flexibility and smoothness of water, is such, that they cannot penetrate the olfactory nerves; fountain water has indeed some smell, but then it is a sign that such water is not pure.

“7. “Water is subject to putrify according as the place is where it is kept. Water will grow thick and stinking, by heat and rest as we find it does in ponds and marshes, and in close vessels. But here it ought to be remembered, that this was what was spoken of before, as such, water is not pure, for unmixed water cannot putrify. This is proved by distilled water, which may be kept very long without putrefaction.

“Rain water which is caught in clean vessels and presently stopped up close and buried under ground, which is kept many years in countries where they want fountains. This shews that the cause of putrefaction is not in the water itself, but in other things that are mingled with it; because pure water, such as is distilled or comes out of the clouds, keeps sweet for a vast while. But then those vessels, in which such water is kept, must be so

well stopped, that the least fly may not get into them, and they must be made of such stuff as will not corrupt, such as glass or clay.

“ But for standing water in ponds or marshes, that is corrupted two ways.

“ By the nature of the soil, which often abounds with noisom sulphur; whereby the water is impregnated and comes to smell in warm weather; as it does at Amsterdam, not only in the trenches, but wherever the ground is opened for the foundation of houses. This putrefaction is owing to the soil, and not to the water.

“ By the nasty things that are thrown into it, or bodies of insects which die in it; as also by the eggs of flies, which are dropped about wherever they go, and breed worms. Water is corrupted in wooden vessels, especially at sea, by the sulphureous parts of the wood, and by uncleanly things, as flies, eggs, &c.

“ Water penetrates the pores of those bodies, whose pores are wide enough to receive its particles. Thus it enters the pores of sugar and salts, so as to separate and quite dissolve their particles; but it cannot get into the pores of stones, or but a very little way; so that it only wets the surface, without diluting them; hangs on the outside of them because they are rough, and because the extremities of their pores are open a little way. But such bodies when they are wet are soon dried in the air, because the motion of the airy particles, carries off the soft and smooth particles of the water.

It is observable that if bodies rubbed over with oil or fat be dipt in water, they get very little wet, because the roughness of their surface wherein the water should hang is smoothed and made even by the fat, and the mouths of the pores are closed up, so that there is nothing left for the watery particles to hold by, and therefore they must needs slide off.

“ Dr. Cheyne observes, that the quantity of water on this side of our globe does daily decrease; some part thereof being every day turned into animals, metalline, mineral and vegetable substances, which are not easily dissolved again into their component parts; for if you separate a few particles of any fluid, and fasten them into a solid body, or keep them asunder one from another, then they are no more fluid: for a considerable number of such particles are required to produce fluidity.

“ Most liquors are formed by the cohesion of particles of dif-

ferent figures, magnitudes, gravities and attractive powers, swimming in pure water, or an aqueous fluid; which seems to be the common basis of all.

“ And the only reason why there are so many sorts of water differing from one another by different properties is, that the corpuscles of salts and minerals, with which that element is impregnated, are equally various.

“ Wine is only impregnated with particles of grapes, and beer is water impregnated with particles of Barley, &c. All spirits seem water saturated with saline or sulphureous particles.

“ And all liquors are more or less fluid, according to the greater or smaller cohesion of the particles, which swim in the aqueous fluid; and there is scarcely any fluid without this cohesion of particles, not even pure water itself, as will appear from the bubbles that will sometimes stand on the surface of it, as well as on that of spirits and other liquors.

“ Water adds much to the growth of bodies, in that it both renders and keeps the active principle fluid; so that they are capable of being conveyed by circulation into the pores.

The learned Mr. Halley has demonstrated, that if an atom of water be expanded into a shell or bubble, whose diameter shall be ten times as great as before, such an atom would be superficially lighter than air, and will rise so long as that flatus, or warm spirit which at first separated it from the mass of water, shall continue to distend it to the same degree, but when that warmth declines, and the air grows cooler and withal specifically lighter, these vapours will stop at a certain region of the air, or else descend.

“ Therefore, if it should be supposed that the whole earth were covered with water, and that the sun should make his diurnal course round it as now he does, he is of opinion, that the air would be impregnated with a certain quantity of aqueous vapours, which it would retain in it, like salts dissolved in water, and that the sun in the day time warming the air, that part of the atmosphere would sustain a greater proportion of vapours (as warm water will hold more salt in it dissolved than cold) which by the absence of the vapours at night would be discharged into dews.

“ And in this case he concludes there could not be any diversity of weather other than periodically every year alike; the mixture of all terrestrious, saline, and heterogeneous vapours

here being excluded, which he judges to be, when variously compounded and driven by winds, which are the causes of these various seasons, and changes of weather which we now find.

“ But instead of supposing an earth covered all over with water, you suppose the sea interspersed about wide and spacious tracts of land, and also divided by high ridges of mountains, such as the Alps, the Appenine, and the Pyrenean in Europe; the Caucasus, the Imaus, and the Taurus in Asia; the mount Atlas of the Moon in Africa; the Andes and Apalatean mountains in America; each of which surpasses the usual height to which the aqueous vapours do of themselves ascend; and on the tops of which the air is so cold and rarified, as to retain but a small portion of these vapours, which are brought hither by the winds.

“ Then the vapours thus raised from the sea, and carried by the winds over the low lands to those ridges of mountains, are there compelled by the streams of the air to mount with it up to their tops, where the water presently precipitates, gleeting down by the cranies of the stones; and part of the vapours entering into the caverns of the hills, the waters thereof gathers, as in an alembic in the basons of stones; and these being once full, the overplus water runs down at the lowest place of the bason, and breaking out by the sides of the hills, forms single springs; many of which running down by the vallies or guts, between the ridges of the hills, and after uniting, form little rivulets and brooks, and many of these meeting again form large rivers.

“ Dr. Woodhouse has made these useful experiments of water following:

“ He tells us, that he chose several glass phials, which were all as near as possible of the same shape and bigness; that he put water into every one of them, as much as he thought fit, and took an account of the weight of it, then strained and tied a piece of parchment over the surface of each phial, and made a hole in the middle of it large enough to admit the stem of the plant he designed to set in the phial, without confining and straitening it so as to hinder its growth. This design was to hinder the enclosed water from evaporating or ascending any other way, than only through the plant that was in it.

To be continued.

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last

1. DELPHINIUM INTERMEDIUM VAR. PALLADIUM. *Pale blue variable Larkspur.*

RANUNCULACEÆ. POLYANDRIA TRIGYNIA.

This very neat and handsome flowering variety, well deserves a place in every flower border, where plants growing seven feet high can be admitted. The foliage is smoother than the original species, of a delicate glaucous green. The flowers are produced in long spikes, of a fine light sky-blue colour, which produce a charming appearance. We have had plants of it blooming eight feet high, with racemes of flowers nearly five feet long. *Delphinium* from *delphis* a dolphin, the resemblance of the nectary.

2. EUCHARDIUM CONCINNUM. *Pretty flowered.* [Bot. Mag. 3589.

ONAGRARIÆ, TENTANDRIA MONOGYNIA.

This neat and pretty flowering annual, is a native of Ross in New California. It appears to be allied to *Epilobium* and *Clarkia*. The stems rise about eight inches high, each terminating by several flowers of a fine rose-colour, with deeper spots and paler veins. Each flower is an inch across. It blooms freely in the open border from July to the end of summer. *Eucharidium*, from *eu, bene*; and *charis gaudium*, alluding to the lively appearance of the flowers.

3. EULOPHIA MACROSLACHYA. *Long spiked.* [Bot. Reg. 1972.

ORCHIDACEÆ, GYNANDRIA MONANDRIA.

This species is an inhabitant of Ceylon, growing and flowering profusely in shady woods, similar to the orchis of our meadows in this country. In the hothouse it blooms freely towards the end of the year, even up to Christmas. The flowers are produced in long racemes, of a green and yellow colour spotted with red. *Eulophia*, from *eulophos*, well crested, surface of middle lobe of lip.

4. GESNERIA ELONGATA. *Elongated.* [The Botanist.

GESNERACEÆ. DIDYNAMIA ANGIOSPERMIA.

It has been stated by Humbolt that this species is a native of Quito, in South America. It was introduced into this country in 1835. Messrs. Pope of Handsworth Nursery, near Birmingham, have had it in bloom in their collection, and it was very much admired. The flowers are of a bright crimson colour, each near an inch long, produced in umbels of four or five on each. *Gesneria*, in compliment to Conrad Gesner of Zurich, who died in 1565.

5. IMPATIENS SCAPIFLORA. *Stemless Balsam.* [Bot. Mag. 3857.

BALSAMINÆ PENTANDRIA MONOGYNIA. SYNONYMS 1. ACANIS. 1. BULBOSA.

This very interesting and pretty flowering species was sent from Bombay to the Glasgow Botanic Garden, William Nimmo, Esq. having transmitted some tubers of it. The plant has bloomed beautifully in the stove. The plant has a very striking resemblance to a *Begonia*. The flowers are produced in scapes, each of which are about ten inches long. The blossoms

are of a delicate rosy purple colour. *Impatiens*, so called on account of the elastic nature of the valves or capsule, which throw out the seeds with considerable force.

6. PLEUROTHALLIS SAUROCEPHALA. *Lizard-headed*. [Bot. Reg. 1968.

ORCHIDÆ. GYNANDRIA MONANDRIA.

This species has been in a few collections of Orchidæ for some years but still remains scarce. It has bloomed in the collection of Sir Charles Lemon, Bart. M. P. Carclew, Cornwall. The flowers are small, of a mixture of brown purple, and greenish yellow.

7. PSORALEA ORBICULARIS. *Round-leaved*. [Bot. Reg. 1971,

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

The late Mr. Douglas sent seeds of this species from California to the garden of the Horticultural Society. It is a hardy Herbaceous plant, blooming in June and July. The flower stems rise to about eight inches high, producing the blossoms in a conical head. They are of a deep rose colour, with a pale blue keel, producing a pretty effect, *Psoralea*, from *psoraleus*, scurfy; the appearance of the calyx.

8. RHIXIA MARIANA. *Maryland Rhexia*. [Botanist

MELASTOMACEÆ. OCTANDRIA MONOGYNIA.

A native of new Jersey. It was introduced many years ago, but was lost in this country. It has recently been sent to the garden of the Birmingham Botanical Society, and bloomed in the greenhouse at that place. It will flourish in the open border in summer, and be preserved in a cold frame in winter. The flowers are of a lilac purple colour, each rather more than an inch across. *Rhexia*, from *rhexis*, a protrusion or swelling, to which some plants of this order were applied as a cure.

9. SIPHOCAMPYLUS BICOLOR. *Two coloured*. [Brit. Flow. Gard. 389.

LOBELIACEÆ. PENTANDRIA MONOGYNIA.

This is a very showy and interesting flowering plant. It is a hardy perennial. Mr. A. Gordon collected seeds of it in Georgia, and sent them to Mr. Lowe, of the Clapton nursery, where it has bloomed. The stems rise to about three feet high, producing flowers very freely. Each corolla is more than an inch long. The tube is scarlet, the three parted limb is yellow. It is a neat and pretty plant, well deserving a place in every flower garden. *Siphocampylus* from *siphon* a tube, and *kampulos* curved, alluding to the curved tube of the corolla.

10. ZYGOPETALAM COCHLEARE. *Shell tipped*. Bot. Mag. 3535.

This species is probably a native of Trinidad, it has bloomed in the Glasgow Botanic Garden. Flowers—Sepals of a pale greenish-white, lip having purple lines and a great purple blotch in the upper half. The scape rises about three inches high, producing a single flower. The flower is more than two inches across. *Zygopetalum*, from *zygos* yoke, and *petalon* a petal, alluding to their being joined at the base.

11. BAERIA CHRYSOSTOMA. *Golden anthered*. [Brit. Flow. Gard.

COMPOSITÆ. SYNGENESIA POLYGAMIA SUPEFLUA.

A hardy annual, growing a foot high. The plant has very much the appearance of *Talinum ciliatum*; but the flowers are of a bright yellow, about an inch across. It is a native of New California; seeds of the plant were sent from the Imperial Botanic Garden at St. Petersburg to this country. The plant has bloomed in the collection of Mr. Janson, Stoke Newington, London. *Baeria*, in compliment to Professor de Baer of the university of Dordrecht.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A LIST OF BULBOUS AND EARLY SPRING FLOWERING PLANTS.—Will you allow me to thank your Correspondent, "An Old Subscriber," for the useful list of annual, biennial, and perennial flowers in your number for March 1835, and to remind him at the same time that a promise of a similar list of the best bulbous and early spring plants have not yet appeared. The introduction into my garden of most of the flowers contained in his former list has given so gay, nay, I may say, splendid appearance to it during the summer and autumn months, that I am extremely anxious to obtain a similar display of beauty for those of the spring, which I have no doubt the kindness of your correspondent will enable me to procure.

PHILO FLOS.

Can you or any of your correspondents inform me if saw dust can by any process be rendered a fit manure for flowers. I two years ago top dressed my beds with oak saw dust, one year old, and nearly rotten, but it killed many, and much injured most of the annuals that happened to have been planted out about a fortnight before. Perhaps the tanning contained in the oak may be prejudicial to flowers? Would a mixture of lime neutralise it?

PHILO FLOS.

ON DELPHINIUM CHINENSIS ALBIFLORA, &c.—A Subscriber to the Floricultural Cabinet would be glad to be informed where *Delphinium Chinensis albiflora*, figured in the (Cabinet of November 1834) is to be obtained. He has bought several purporting to be the sort mentioned but they have invariably turned out the single blue species, a trick he is sorry to say of very common occurrence with some nurserymen. An early answer will oblige.—He would also be glad to know where *Cenothera anesiloba* is to be had.

ON THE BEST SEASON FOR SOWING PANSEY SEED—I have collected during the three first weeks of August a quantity of pansy seed, but am at a loss to know whether to sow it this season, or defer it till spring. I was afraid to sow it now, lest the plants should be too weakly to endure the winter, yet I thought if I could secure the plants through winter, I should have strong plants for blooming early next season. I should be glad if some reader of the Cabinet, who has had experience in this particular, would give a paper upon it, saying, how late, if this season, seed may be sown, and the plants treated so as to abide through winter. And if not till spring, how to treat them the successive period of the year. An early compliance with his request will much oblige,

A LADY.

ANSWERS.

ON DESTROYING THE GREEN FLY INSECT INFESTING THE ROSE, &c.—In a former Cabinet "Rosa" wishes to know how to destroy the green fly insects, on rose trees, in the cheapest, easiest, and most effectual manner. I would recommend him to throw, with great force, handfuls of fine sand (sea sand, if he is near the coast, as I am, is cheap enough) and he will find his trees very soon clean and healthy. Probably coal ashes reduced very fine, might answer as well as sand, but I have never tried it. CALCEOLARIA.

REMARKS.

PLANTS IN BLOOM AT THE NURSERY OF MESSRS. ROLLESON, TOOTING.—

Hardy.	Greenhouse.—
<i>Lonicera hispidula</i>	<i>Azalea lateritia</i> .
<i>Lilium atrosanguinum</i>	<i>Azalea lateritia</i> alba both quite new from China.
<i>Oenothera Drummondii</i>	<i>Spirea japonica</i>
<i>Flox Omniflora</i> .	<i>Lilium lancefolia rubra</i>
<i>Delphinium Hulmi</i>	" <i>eximia</i>
" <i>Barlowii</i>	<i>Erica Cavendishii</i> a very splendid new yellow
<i>Dianthus versicolor</i>	<i>Hothouse.</i>
<i>Linum</i> , new species from Chili.	<i>Rondeletia speciosa</i>
<i>Potentilla tormentilla Tonguii</i>	<i>Ixora purpurea</i> .

DESTRUCTION OF INSECTS AND VERMIN.—It has long been known, that the leaves of the Elder when put into the subterraneous paths of moles, will drive them away; when the same in a green state are rubbed over fruit trees and flowering shrubs, or when strewed among corn or garden vegetables, insects will not attach to them. An infusion of these leaves in warm water is good for sprinkling over rose-buds and flowers subject to blight; also to prevent the devastation of the caterpillar.

A Pennsylvania farmer states, in a late American journal, that the water in which potatoes have been boiled, sprinkled over grain or garden plants completely destroys all insects, in every stage of existence, from the egg to the full grown fly.

Ammoniacal liquor, produced in the manufacture of gas from coal, and to be procured for the trouble of carrying, at any gas work, will eventually destroy the grub and other worms, which so often defeat the hopes of the gardener; more particularly as regards his early crops. So far is this liquid from having the property of injuring even the tenderest plant, that it seems rather to invigorate than otherwise.

A paste of charcoal powder, or soot and train oil, laid on the trunks of trees, in rings or circles, by means of a brush, a few inches from the ground, will form a barrier over which snails or grubs, &c. cannot pass.

Cabbages, &c. may be easily guarded against the depredations of caterpillars, by sowing a belt of hemp seed around the borders of the ground where they are planted; for it is a well known fact, that none of these vermin will approach the place so enclosed.

Destruction by the fly in turnips may be prevented by dividing the seed intended for one day's sowing into two equal parts, and putting one part to steep in a vessel containing soft pond, or ditch water, the night previous to its being used. Next morning mix the whole together, and add to each pound of seed two ounces of flour of sulphur. It has been adopted with success for many years by the intelligent farmers of the south west of Scotland.

By the following method an eminent horticulturist near Derby, never lost a seed by vermin, although they sometimes burrowed in a direct line with almost every row of peas, beans, &c. that he sowed: it consisted merely in steeping the grain or seed for three or four hours, or during a sufficient time to penetrate the husk, in a strong solution of the sulphuret of potash, commonly known by the name of liver of sulphur.

The American farmers effectually prevent the blight or mildew from injuring their orchards, by rubbing tar well into the bark of the apple trees in the spring season: this is done about four or six inches wide round each tree, and at about a foot from the ground. Abundant crops generally follow this treatment.

The gumming of fruit trees is to be prevented by forming a compost of horse dung, clay sand, and tar. This applied to the trunk and stems of fruit

trees, after being properly cleansed, will prevent that spontaneous exudation, called gumming, which is so injurious to their growth.

The growth of weeds around fruit trees recently transplanted does the latter much injury, and diminishes the fruit both in size and quality. Sonnini, in his *Bibliothèque Physico Economique*, states, that to prevent this the German horticulturists and farmers spread on the ground, around the fresh transplanted trees, as far as their roots are supposed to extend, the refuse stalks of flax, after the fibrous parts have been separated. This treatment gives them surprising vigour, as no weed will grow under flax after the fibrous part have been thoroughly separated and the earth remains fresh and loose. Old trees treated in the same manner, when languishing in an orchard, will recover and push out vigorous shoots. In place of flax stalks, the leaves which fall from trees in autumn may be substituted; but these must be covered with waste twigs, or other more weighty materials, to prevent the wind from blowing them away.

Mr. Macdonald, of Scalpa, in the Hebrides, having had his corn, &c. considerably injured by mice, and other vermin, put at the bottom, near the centre and at the top of each stack or mow, as it was raised, a handful of the stalks of wild mint, gathered near a brook in a neighbouring field: he never afterwards had his grain consumed. He tried the same experiment with his cheese and other articles kept in his dairy, viz. by laying a few leaves green or dry on the articles to be preserved from their attacks, and with equal success.

To prevent hares, rabbits, and rats from barking young trees and plantations, take any quantity of tar, and six or seven times as much grease, stirring and mixing them well together; with this composition brush the young trees, as high as hares, &c. can reach. This will so effectually prevent them from being barked, that if an ash plantation were made in a rabbit warren, the same would remain untouched.—*GARDENER'S GAZETTE*.

THURLASTON FLORAL AND HORTICULTURAL SOCIETY.—Principally set on foot for the encouragement of industrious cottagers.—The second exhibition of this interesting society took place on Tuesday, the 27th of June last at the National School-room, Thurlaston, and was attended by a very numerous and respectable company. The weather was particularly fine throughout the day, and the scene was greatly enlivened by an excellent band of music. The productions shewn by amateurs were of a superior description; more particularly the *Ranunculuses* of Mr. Smalley, the *Pelargoniums* of Captain Puckford, a beautiful pyramid of various *pelargonium* blooms by Mrs. Sheldon Craddock, and an ornamental basket of flowers by John Clarke, gardener to John Wilson, Esq.—The cottagers' tables were literally crowded with well grown flowers, prettily arranged nosegays, and vegetables of the finest quality: their rewards were as well deserved as they were gratefully received. The judges on this occasion were Mr. Cooper, gardener to the Lady de Clifford; Mr. Hopley, gardener to Sir F. Fowke; and Mr. Holland, florist, Narborough, who gave general satisfaction to the competitors.

List of prizes to the Subscribers.

Ranunculuses, the best pot of five flowers of different names, Dark, light, striped and mottled, Mr. Smalley, Oadby; mixtures, Mr. Oliver, Earl Shelton.

Pansies, the best collection of twelve varieties; named, the Rev. R. Wilson Taylor, Thurlaston; the best collection of twelve seedlings, ditto; extra prize, Mrs. Bridges Narborough.

Pelargoniums.—Light, Imogene; red, Perfection; dark, *Lucasii*, Captain Puckford.

Greenhouse plants, the best collection of six different varieties, J. Wilson, Esq.

Brompton Stocks.—The Rev. J. Sankey, Stony Stanton.

Ornamental basket of flowers.—J. Wilson, Esq.

Ornamental stand of flowers.—Mrs. S. Craddock

Bouquet of flowers.—Mr. Oliver.

Bouquet of hardy perennials, fifty-one varieties.—Rev. R. Wilson Taylor.

SHEFFIELD BOTANIC SOCIETY.—The exhibition of plants, flowers and vegetables for the season lately took place. The tent for the display of vegetables was fixed in the lower part of the gardens, conveniently arranged, with a table, eight feet in width down the centre, and having a space on each side for the accommodation of visitors. In this tent numerous articles were exhibited of very great beauty and excellence. Mr. Paxton's *Clerodendrum* with rich scarlet flowers, although a good deal injured by its long carriage from Chatsworth, was nevertheless much admired. Mr. Braide's *Elichrysium venusta*, and *Erica ordonata*, were pronounced by competent judges to be the finest in the kingdom. There were many other plants which displayed much skill and attention in their cultivation; such as *Fuchsias*, *Geraniums*, *Calceolarias*, *Pinks*, *Ranunculuses*, *Roses*, *Annuals*, &c. On the first day the gardens were visited by a large number of the proprietors and subscribers. On the second day the number of visitors was larger than on the first. The cavalry band was in attendance both days, and the weather being fine, many strangers from a distance, as well as persons in the town and its surrounding neighbourhood, availed themselves of this opportunity of testifying their love for the beauties of Flora, and the rich treat which such exhibitions are calculated to supply, collected, as many of the specimens not unfrequently are, by obtaining a few seeds or roots from the remotest parts of the globe, but yet seldom visited by civilized men.

The judges were for the plants—Mr. H. Shepherd, Botanic Garden, Liverpool; Mr. Rider, nurseryman, Leeds; Mr. Parkin, gardener to Mr. Stanhope, Cannon Hall; and Mr. Wilson, gardener to the earl of Surrey.

PLANTS.—Stove Plants. 1. *Clerodendrum speciosissimum*. Mr. Paxton. 2. *Brunfelsia Americana*, Mr. Appleby, Gardener to J. Young, Esq. 3. *Sinningia guttata*, Mr. Waters, gardener to Mrs. Shore, Meersbrook.

Orchideous plants. 1. *Oncidium Lanceanum*, Mr. Menzies, gardener to C. Rawson, Esq. Halifax. 2. *Egidendrum Oncidioides*. 3. *Maxillaria cristata*, Mr. Paxton.

Bulbs, or Scitamineous. 1. *Wurmbea purpurea*. 2. *Lapeyrousia corymbosa*. 3. *Babiana rubro-cyanea*, Mr. Appleby.

Succulents in flower. 1. *Epiphyllum splendidum*. 2. *Epiphyllum Jenkinsoni*, Mr. Appleby.

Succulents not in flower. 1. *Cactus senilis*, Mr. Paxton.

Collection of Ferns. 1. *Blechnum Cavendense*, *Adiantum trapeziforme*, and a species from Mexico. 2. *Blechnum angustifolium*, *Lygodium Scandens* *Gymnogramma*, Mr. Waters.

Green-house Plants. 1. *Elichrysium venusta*, Mr. Braide, gardener to H. Wilson, Esq. Birthwaite Hall, near Barnsley. 2. *Pimelia decusata*, Mr. Paxton. 3. *Lachenaultia formosa*.

Ericas, 1. *E. odorata*, Mr. Braide. 2. *E. ventricosa superba*, Mr. Appleby.

Dark *Geraniums*, 1. *Angustissima*, Mr. R. Turner, of Sheffield, florist. 2. Lord Nelson, Mr. Appleby.

Rose *Geraniums*, 1. *Statvia*, Mr. Hall, Doncaster. 2. Tam O'Shanter, Mr. R. Turner.

White *Geraniums*. 1. *Hilleanum*. 2. *Cleopatra superba*, Mr. Appleby.

Collection of three shrubby *Calceolarias*, 1. Captain Rosa. 2. *Sessifolia*, Mr. Appleby.

Collection of Herbaceous *Calceolarias*, 1. *Guttata*, Mr. Barron. 2. Countess of Shrewsbury, Mr. Appleby.

Greenhouse succulents in flower. 1. *Mesembryanthemum species*, Mr. Appleby. 2. Ditto, Mr. Menzies.

Annuals in Pots. 1. *Collinsea bicolor*, Mr. Paxton,

Fuchsias, 1. *Fuchsia globosa*, Mr. Braide. 2. *Globosa*, and 3. *Grandiflora*, Mr. Menzies.

Herbaceous Plants, 1. *Cypripedium spectabile*. 2. *Penstemon digitalis*, Mr. Menzies.

Hardy Shrub, 1. *Deutzia scabra*. 2. *Azalea Recentiasima*, Mr. Menzies.

Display of cut Flowers, 1. The crown, with the word "Victoria," round the bottom, Mr. Paxton. 2. Splendid pyramid, Mr. Appleby.

Roses, Hybrid or China, 1 and 2, cut flowers, Mr. Hall.

Roses, Province or Garden varieties, 1 and 2 cut Flowers, Mr. Hall.

Moss Roses, 1 and 2 cut Flowers, Mr. Hall.

Extra Prize for Hardy Ferns—*Asplenium fontanum* Marinum, *Woodsia ilvensis*, *Asplenium lanceolatum*, *Polypodium calcareum*, Mr. Waters.

Extra Prize for the South American Pitcher Plant—*Cephalotus folicularis*, Mr. Paxton.

FLOWERS.—First pan of 10 *Ranunculuses*, Mr. William Archer; 2d ditto of 10 *Ranunculuses*, Mr. Birley, Earl Street, Sheffield. First Pan of 6 *Ranunculuses*. Mr. Smith, Ecclesall, New Road; second ditto of 6 *Ranunculuses*, Mr. Birley. Collection of less than 12 varieties of *Panxies*, Mr. Turner, florist, Sheffield. Best Pan of 12 *Pinks*, Mr. Smith, Ecclesall, New Road; Second ditto of 12 *Pinks*, Mr. Simonite, Sheffield Park.

PLANTS.—Mr. Appleby being the competitor who had obtained the greatest amount in money Prizes, in the different classes of plants, received, in addition to his prize money, an elegant fowling piece, presented by Joseph Shore, Esq. of Birmingham, value £15.

Mr. Paxton having obtained the second greatest amount, received, in addition to his prize money, a silver cup, value £5.

FRUITS.—The greatest amount in money prizes having been obtained by Mr. Paxton, he received in addition to the money prizes, a silver cup, value £10.

The second greatest amount having been obtained by Mr. Batley, of Wentworth Castle, he received in addition a silver cup, value £5.

VEGETABLES.—A silver cup, value £10, was received by Mr. Abraham, South street, who had obtained the greatest amount in money prizes.

Mr. Waterhouse, having obtained the second greatest amount, received a prize, value £2 10s.

COTTAGERS' CLASS.—Mr. Marsden Little Sheffield, received one sovereign in addition, having obtained the greatest amount of money prizes for vegetables.

Mr. Machon, Little Sheffield, received 10s. for having obtained the second greatest amount.

Mr. Fielding, Sheffield, received 5s. for having obtained the third greatest amount.

A CHAPTER OF FLOWERS.—Flowers of all created things are the most innocent and simple, and most superbly complex; playthings for childhood, ornaments of the grave, and the companion of the cold corpse in the coffin. Flowers, beloved by the wandering idiot, and studied by the deep thinking man of science! Flowers that of perishing things are most perishing, yet of all earthly things, are the most heavenly. Flowers, that unceasingly expand to heaven their grateful and to man their cheerful looks—partners of human joy, smoothers of human sorrow; fit emblems of the victor's triumphs, of the young bride's blushes; welcome to crowded halls, and graceful upon solitary graves!.....Flowers are in the volume of nature, what the expression "God is love," is in the volume of revelation.....What a dreary desolate place would be a world without a flower! It would be a face without a smile—a feast without a welcome.....Are not flowers the stars of the earth, and are not flowers the stars of heaven? One cannot look closely at the structure of a flower without loving it. They are emblems and manifestations of God's love to the creation, and they are the means and ministrations of man's love to his fellow creatures; for they first awaken in his

mind a sense of the beautiful and the good..... The very utility of flower, is their excellence and great beauty; for they lead us to thoughts of generosity and moral beauty, detached from, and superior to all selfishness; so that they are pretty lessons in nature's book of instruction, teaching man that he liveth not by bread or from bread alone, but that he hath another than an animal life.

ON OBTAINING LARGE FLOWERS OF THE DAHLIA.—I have been given to understand that nurserymen who exhibit Dahlias at the shows, and produce flowers of such immense size, are accustomed to prune away the greater part of a plant, as well as the flower buds at an early stage. I wish some person who has practised these operations, would give a few instructions, at what stage of growth this may be effected, and how performed, &c.

CLERICUS.

ON IPOMEA AND CONVULVULUS.—The genera *Ipomea* and *Convolvulus* are so similar, that many unite them into one, but the best botanists keep them separate. In *Convolvulus*, the calyx sometimes has two small bracts. In *Ipomea* it is always naked. In *Convolvulus* the stamens are shorter than the limb of the corolla. Ovary is two, seldom three celled; and the stigmata are two, filiform, not capitate.

BOTANIST.

FLORICULTURAL CALENDAR FOR SEPTEMBER.

Annual flower seeds, as *Clarkia*, *Collinsia*, *Schizanthuses*, *Ten-Week Stocks*, &c. now sown in pots and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when spring-sown plants are coming into bloom.

Carnation layers, if struck root, should immediately be potted off

China Rose cuttings now strike very freely; buds may still be put in successfully.

Mignonette may now be sown in pots to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants of which will bloom in May.

Pinks, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season.

Plants of Herbaceous *Calceolarias* should now be divided, taking off offsets and planting them in small pots.

Verbena Melindris (*chamædrifolia*.) Runners of this plant should now be taken off, planting them in small pots and placing them in a shady situation. It should be attended to as early in the month as convenient.

Plants of Chinese *Chrysanthemus* should be repotted if necessary; for if done later, the blossoms will be small. Use the richest soil.

When *Petunias*, *Heliotropium*, *Salvias*, *Pelargoniums* (*Geraniums*), &c. have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips, and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided and planted out in the ensuing May in open borders of rich soil, the plants will be stocky, and bloom profusely.

Tigridia pavonia roots may generally be taken up about the end of the month.

Greenhouse plants will generally require to be taken in by the end of the month. If allowed to remain out much longer, the foliage will often turn brown from the effect of cold air, &c.

Plants of *Pentstemons* should be divided by taking off offsets or increased by striking slips. They should be struck in heat.

The tops and slips of *Pansies* should now be cut off, and be inserted under a hand glass, or where they can be shaded a little. They will root very freely and be good plants for next season.



Kennedia marryattii.

Loelias.

*aurora
grandiflora*

propinqua



C.W.H. Del.

J. & J. Parkin Sc.

THE
FLORICULTURAL CABINET,
OCTOBER 1st, 1837.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.
ON THE CULTURE OF PHLOX DRUMMONDII.

BY A
CLERGYMAN'S DAUGHTER, IN SURREY.

THE flowers of the whole tribe of Phloxes are beautiful, and in general admiration, they are highly ornamental to a flower garden, and merit a place in every one. Nearly every species is of a desirable height for it, growing from one to two feet and a half high. The plants are of easy culture, and to be obtained at a trifling price. These facts induce me to offer some observations upon the culture, &c. of the whole genus, having in my possession every species and variety I have hitherto heard of.

During the present summer I have been quite delighted with that most charming, newly introduced kind, *Phlox Drummondii*, and its varieties. In 1836 I procured a plant of the original kind and kept it in a pot through winter; early in May I procured small plants, eight or ten inches high, of several hybrids, and immediately turned them out into a bed. The hybrid varieties were *venustum*, a most beautiful rose colour, having a dark centre; *formosum*, lilac, dark red eye, very large, round flower; *pulchellum*, very dark velvet crimson, black centre, round flower; *bellissima*, lilac with very large, crimson eye; *speciosa*, very dark velvet crimson, rather star shaped, darker centre; *carnescens*, a light rosy-pink. The original kind is of a rosy-red with a small

eye. These seven kinds I had sufficient of to plant a small circular bed, a yard in diameter, of each in my flower garden, seven plants in a bed. The beds were at a distance of about ten yards from each other, with intervening beds planted with other plants. I had each bed raised high at the centre, so that when the plants were in bloom, the bed had the appearance of a cone of splendid flowers, beautiful in appearance, and producing a neat and striking effect.

My soil is a sandy-loam what I enriched moderately with some rotten manure. I have already gathered some seeds from each kind, and I observe there is an appearance of obtaining a good supply; a paper of each I inclose for the Conductor of the Cabinet. In 1836 I had the original kind but not early enough to afford me an opportunity of obtaining any seed, but having plenty of young shoots upon the plant about four or five inches long, I took a quantity off early in September, inserted them in sandy loam, and placed them on a gentle hot-bed, within a frame, and in three weeks they had struck root. I removed the pots of cuttings at the end of October into a cool part of a greenhouse, where I kept them healthy through winter, and at the end of March I potted them off, singly, into small pots, and in May turned those I wanted for the purpose into the bed in the flower garden, and removed a few into larger pots to adorn the greenhouse, where they have flowered most profusely. The same mode of propagation will, of course, equally succeed with my hybrid varieties, so that I shall be able to keep up each kind permanently.

The seeds I shall obtain from the plants I possess this year will be sown next spring, and doubtless the produce will afford me many handsome varieties. Whether the plants be grown in the greenhouse, on beds of a sort, or singly in the general mass of a flower bed, in each, and in all nothing can be more neat and striking as a flower.

My plants, in the open border, came into bloom early in June, and have been in profusion up to the present time, September, and will continue to bloom as long as the season admits.

The tallest of my plants grow about two feet high, and have spreading heads proceeding from a single stem, more than half a yard across.

(To be Continued.)


ARTICLE II.

ON THE CULTURE OF THE PANSY.

BY S. C. COOK, COVENTRY.

SEEING several subjects in your Floricultural Cabinet on the culture of the Pansy, I herewith send you my mode of cultivating this beautiful tribe of plants. The aspects I prefer is a south-east one, the blossoms are soon shaded from the intense heat of the sun, and screened from strong winds; I always prefer growing them in beds, which beds are four feet wide, and in length according to the number cultivated. The bed is supported at the edges with iron work of a low form, as fig. 1.

Fig. 1.



The compost I use is one fourth maiden loam, two fourths black garden mould, and one fourth rotten dung. When the bed is prepared, I draw lines longitudinally from one end of the bed to the other, by which lines I set the plants in rows. A bed four feet wide will allow of four longitudinal rows of plants; there should be one foot allotted to each plant in the rows, I always choose short strong plants, which are small in circumference. When I have finished planting, I procure some hoops and mats, for the purpose of shading the plants for a few days, until they have fully established themselves. As soon as the season of propagating commences, which I consider about the first of July, or if a late season it may be delayed till the first of August; I proceed cutting off the strongest shoots, observing to cut them off at a joint, and then putting the different varieties into separate vessels of soft water, for a few hours, which I find greatly to promote their striking. The cutting bed is composed of about one-third pit or river sand, to insure a closeness round the cuttings; then the cuttings of each variety are planted separately and numbered, and are allowed to remain in that situation until the following spring, when they are taken up and planted in beds. It greatly improves the flowers, if the plants are watered with liquid manure, twice, or three times a week; it is necessary to keep a watchful eye upon the plants that are left for seed, for it will disperse itself in a few minutes after it is matured. I would here mention the utility of impregnating the flowers of different varieties, by impregnating the best formed kinds, and those having flowers of the finest, most clear and distinct, as the remotest in colour from each other. The produce will be kinds almost certainly to be depended upon as good, and in colour what

may naturally be depended upon by a comixture of any two principal colours in the flowers. It is a most interesting attention to be paid to this charming, sweet, flower, to raise the plants, watch their progress, and to daily, in the season, see the first opening flowers of new varieties. It far more than compensates for any attention bestowed.

ARTICLE III.

DIALOGUE BETWEEN BLOOMWELL, AN OLD FLORIST ; AND WOULDKNOW, A NEW BEGINNER.

BY BIZARRE.

WOULDKNOW. Good morning to you, Mr. Bloomwell, you see I am come again to admire your carnations.

BLOOMWELL. I assure you, Sir, I am very glad that my flowers have sufficient beauty to attract your notice ; allow me to introduce you to no less a personage than the Queen of Sheba.

WOULDKNOW. You mean Lasselles' Queen of Sheba, purple flaked, I suppose ? I have heard much talk about it.

BLOOMWELL. Now, you see it, what do you think of it. ?

WOULDKNOW. I think it a most beautiful flower, and an indispensable one in every good collection.

BLOOMWELL. You are right, it has high colour, good white, and sufficient size. These are very desirable properties, but it is apt to throw the petals too much out of the calyx, and by that circumstance soon becomes loose.

WOULDKNOW. I heard Mr. M., lay a wager the other day at S. Show, that he had paid particular attention to it, and was convinced that Turner's Princess Charlotte and it, were one and the same flower, do you agree with him in that opinion ?

BLOOMWELL. Certainly not, there may be, and is, a great similarity, but the Queen of Sheba was raised by a gentleman, who could not for a moment be suspected of such a gross deception, as to give out as a seedling of his own, an old and well known flower. A scientific botanist would perhaps sooner point out the difference than a florist, I think Mr. M. could not have paid a greater compliment to the Queen of Sheba than by indentifying her with the Princess Charlotte, a flower which has stood at the head of its class for many years.

WOULDKNOW. Pray what beautiful scarlet Flake is that, at the end of the stage?

BLOOMWELL. An old favourite of mine, Pearson's Madam Mara, which when well blown, is surpassed by no flower of its class that I have seen. Perhaps no flower is more universally grown, and I believe no flower has taken more prizes. The scarlet is good, the white at first has a pink shade, but bleaches as the flower expands. The petals are very apt to cup, and from that circumstance often crack at the edge which spoils the bloom.

WOULDKNOW. Pray is not Stearne's Dr. Barnes, said to be the same flower with this?

BLOOMWELL. It has been so said, and no doubt as there is a great likeness, the old flower has been frequently sold for the new one by unprincipled persons, and this has caused the two to be confounded. I have never had Dr. Barnes from the raiser which is the surest way of comparing the flowers, and I cannot believe any true Florist would be guilty of such an imposition, without the clearest evidence; another reason for doubting the identity of the two flowers in question is, from my own experience. A few years ago I raised a seedling scarlet Bizarre, from Wild's perfection, so much like the parent, that it might easily have passed for it without much danger of the cheat being discovered. This being my case, why may not others have had the same thing happen to them? The whole mystery seems to me to be thus easily accounted for. A new flower of uncommon attraction is announced, some old stager of more cunning and sagacity than honesty, finds out that it is very much like some old and cheap sort, and instigated by the love of gain, immediately substitutes the one for the other, so that in a year or two the confusion becomes complete.

WOULDKNOW. Are there many flowers in this perdicament?

BLOOMWELL. Perhaps there may, in the Florist's Gazette for 1832, I find Leightons' Miss Foote, and Sir George Crewe, rose flakes, classed as one flower. Also in the same class Faulkner's Eliza, and Smalleys' Wonderful. With respect to the former of these, I can say nothing, having grown Sir George Crewe only, but for the latter, I affirm there are not in the whole class perhaps two flowers more unlike. I had 'Wonderful' from a person who had it from the raiser, and 'Eliza' from a gentleman amateur, who is very careful in his selection of plants, and in all probability had

it direct from the raiser. 'Eliza' is a Pink flake of low growth, a shy breeder, and bad striker; 'Wonderful,' on the contrary, is a high Rose flake, of taller and freer growth, a larger bloom, and in all respects a *wonderful* deal the best flower. How they came to be confounded, whether by accident or design I cannot tell, but I believe 'Wonderful' is generally sold for both. What I consider the true 'Eliza' being comparatively scarce.

WOULDKNOW. What pale coloured flower is this, it seems to be a crimson or purple Bizarre, but the quantity of dark colour is very small?

BLOOMWELL. That flower should be a caution to you not always to expect the highest priced flowers to be the best, it is called Huggin's Brilliant. But in what its brilliancy consists I have yet to learn. I have grown it these three years, and the bloom you now see on it, is the best in colour I have had. In Mr. Hogg's Catalogue for 1830, it is offered at twenty shillings per pair. If it never blooms better than I have seen it, it would be too dear at twenty pairs for a shilling; for to my fancy, a flower that is short of colour has the greatest fault possible. I would sooner have a rough edge, or a deficiency of size, or any other single defect, where the colouring was splendid, than this defect of pale colouring, though the flower was as large as a Dahlia.

WOULDKNOW. What a fine high coloured rose flake the next is, this will not loose your favour for want of colour.

BLOOMWELL. True, but it sometimes looses it by having too much, being rather subject to run, it is called Fletcher's Duchess of Devonshire, and is said to be a sport from Gregory's King Alfred, that fine old crimson Bazarre, in the next pot.

WOULDKNOW. Is it possible that this can be the case.

BLOOMWELL. It certainly is possible, but the probabilities are ten to one against it.

(To be continued.)

ARTICLE IV.

ON WATER AND WATERING PLANTS.

(Continued from p. 208.)

"Then he made choice of several sprigs of Mint, and other Plants, that were, as near as he could judge, alike fresh, sound,

and lively ; and having taken the weight of each, he placed it in a phial, ordered as above ; and as the plant imbibed and drew off the water, he added more from time to time, keeping an account of the weight of all he added.

“Each of the glasses were, for the better distinction and the more easy keeping a register noted with a different mark or letter as A, B, C, &c. and all set in a row in the same window, that they might all partake alike of the air, light and sun.

Thus they continued from July the twentieth, to October the fifth, which was just seventy seven days ; then he took them out and weighed the water in each phial, and the plant also, adding to its weight that of all the leaves which had fallen off during the time it stood thus. And lastly, he computed how much every plant had gained, and how much water was spent upon it. The particulars are as follows.

“A. a common spear mint set in spring water.

“When the plant was put in, in July the twentieth, it weighed just twenty-four grains ; when taken out, October the fifth, it weighed forty two grains ; so that in the space of seventy seven days, it had gained in weight fifteen grains.

“The whole quantity of water expended during the seventy seven days amounted to two-thousand-five-hundred and fifty-eight grains ; and consequently, the weight of the water taken up was one-hundred and seventy and three-thirteens times as much as the plant had got in weight.

“B, common spear mint set in rain water, the mint weighed when put in, twenty eight grains and a half, and when it was taken out forty five grains four thirds, having gained in seventy seven days seventeen grains and an half.

“The whole quantity of water expended was three thousand and four grains which was an hundred and seventy one twenty-three thirty-fives times as much as the plant had received in weight.

“C, common spear mint set in Thames water. The plant when put in weighed twenty eight grains, when taken out fifty four grains, so that in seventy seven days it had gained twenty six grains.

“The whole of the water expended, amounting to two thousand four hundred ninety three grains which was ninety five, twenty-three twenty-six times as much as the additional weight of the mint.

"D, The common solanum or nightshade set in spring water. The plant weighed when put in, forty nine grains, and when taken out one hundred and six grains, having gained in seventy seven days-fifty seven grains.

"The water expended during the seventy seven days was three thousand seven hundred and eight grains, which was sixty five three fifty seven as much as the augment of the plant.

"The spearmint D had several buds upon it, when first set in water; these in some days became fair flowers, which were at length succeeded with berries.

"Several other plants were tried that did not thrive in water, or succeed better than the cataputia.

F, lathyrus or cataputia gerb, set in spring water; it weighed when set in, ninety eight grains, when taken out one hundred and one grains and an half. The additional weight for the seventy seven days being but three grains and an half.

"The quantity of water, spent upon it during that time, was two thousand five hundred and one grains, which is seven hundred fourteen times four thirds as much as the plant was augmented.

"F, G, those two phials so marked, were filled, the former with rain, and the latter with spring water, at the same time that the other before mentioned were, and stood as long as they did, but had neither of them any plant, his design in this being only to inform himself, whether any water exhaled out of the glasses, otherwise than through the bodies of the plants. The orifices of these glasses were covered with parchment, each piece being perforated with a hole of the same bigness with the other. And he suspended a bit of stick, about the thickness of the stem of one of the aforesaid plants, but not reaching down to the surface of the included water. These he put in thus, that the water in these might not have more scope to evaporate, than that in the other phials.

"Thus they stood the whole seventy seven days in the same window with the rest; when, upon examination, he found none of the water in these wasted or gone off. Though he observed, both in these and the rest, especially after hot weather, small drops of water adhering to the insides of the glasses; that part of them that was above the surface of the inclosed waters.

"The water in these two glasses that had no plants in them, at the end of the experiment, exhibited a larger quantity of terres-

trial matter, than that in any of those that had the plants in them did. The sediment in the bottoms of the phials was greater and the nubeculæ diffused through the body of the water, was thicker."

"And of that which was in the others, some of it proceeded from certain small leaves that had fallen from that part of the stems of the plants, that was within the water, wherein they rotted and dissolved. The terrestrial matter in the rain water was finer than that in the spring water.

"In the year 1692, he made the following experiments with Hyde Park conduit water. The glasses, he made use of in this, were of the same sort with those of the former, and covered over with parchments, in like manner. The plants were all spear mint, the most kindly, fresh, sprightly shoots he could chuse. The water and the plants were weighed as before, and the phials set in a line in a south window; where they stood from June the second to July the twenty-eighth, which was just fifty six days.

"H. Hyde Park conduit water alone. The mint weighed when put in, one hundred and twenty seven grains; when taken out, two hundred and fifty five grains: the whole quantity of water expended upon this plant, amounted to fourteen thousand one hundred and ninety grains. This was all along a very kindly plant, and had run up above two feet in height. It had shot but one considerable branch, but had sent forth many and long roots from whence sprung very numerous and short fibres. These lesser came out of the larger, on two opposite sides for the most; so that each root with its fibrilla appeared not unlike a small feather. To these fibrillæ pretty much terrestrial matter adhered. There was a green substance in the water, resembling a fine, thin conserva, which was at last thick and turbid.

"The plant I. The same water alone. The mint weighed when put in, one hundred and ten grains; and when taken out, two hundred and forty nine: the water expended was thirteen thousand one hundred and forty grains.

"This was as kindly as the former; but had shot no collateral branches. The roots of it, the water, and the green substance, all much as in the former.

"The plant K. The mint was set in Hyde Park conduit water, in which was dissolved an ounce and a half of common garden earth. It weighed, when put it, seventy six grains; when

taken out, two hundred and forty four grains: water expended ten thousand seven hundred and thirty one grains. Though this plant had the misfortune to be annoyed with very small insects, that happened to fix upon it, yet had shot very considerable collateral branches, and at least as many roots as either in H or I, which had a much greater quantity of terrestrial matter adhering to the extremities of them. The same green substance here that was in the two preceeding.

"L was set in Hyde Park conduit water, with the same quantity of garden mould as in the former. The mint weighed, when put in, ninety two grains; when taken out, three hundred and seventy six grains. And the water which was expended, was fourteen thousand nine hundred and fifty grains.

"This plant was more flourishing than any of the preceedent, had several considerable collateral branches, and very numerous roots, to which terrestrial matter adhered very copiously.

"The earth in both these glasses was very sensibly and considerably wasted, and less than when first put in. The same sort of green substance here as in those above."

"The plant M was set in Hyde Park water, distilled off with a gentle still. It weighed when put in, one hundred and fourteen grains; when taken out, one hundred fifty five: the water expended was three thousand eight hundred and three grains.

"This plant was pretty kindly, had two small collateral branches, and several roots, though not so many as that in H or I; but as much terrestrial matter adhering to them, as those had. The water was pretty thick, having very numerous, small terrestrial particles swimming in it, and some sediment at the bottom of the glass. This glass had none of the green matter above mentioned in it.

"N was set in the residue of the water, which remained in the still after that in M was distilled off. It was very turbid, and as high coloured (reddish) as ordinary beer. The mint weighed, when put in, eighty one grains; when taken out, one hundred seventy five grains. The water expended was four thousand three hundred forty four grains.

"This plant was very lively, and had sent out six collateral branches, and several roots.

"The glass O, had Hyde Park conduit water, in which was a dram of dissolved nitre.

“The mint, set in this, suddenly began to wither and decay, and in a few days died; as likewise did two more sprigs that were set in it successively.

“In another glass he dissolved an ounce of good garden mould and a dram of nitre.

“And in a third, half an ounce of wood-ashes, and a dram of nitre; but the plants in these succeeded no better than the former.

(To be continued.)

ARTICLE V.

ON IMPREGNATING CALCEOLARIAS, &c.

BY AN ENQUIRER

I HAVE just been told that Calceolarias can be successfully impregnated with blossoms of different genera, and the result is, that Calceolarias are produced from the seed, of a vast variety of colour. If my information be correct I should be glad if some person, or persons, who have tried it, would give a list in the Cabinet of the sorts of plants which have succeeded, in impregnating successfully the Calceolarias. Also when to sow the seed; how to treat the young plants, &c, so as to get them into bloom as early as possible. An article to be inserted in the November number would much oblige,

AN ENQUIRER.

ARTICLE VI.

ON RAISING CARNATIONS AND PICOTEEES FROM SEED.

BY AN OLD FLORIST.

THE culture of the Carnation, though elaborately written upon by many with ability and experience, has in one point, and that a very material one, been either totally neglected or slightly or discouragingly mentioned, I mean the progressive improvement of the flower and its subvariety the Picotee, by raising new plants from seed. Hitherto we have been taught that the production of new and fine varieties of either Carnation or Picotee, is an extremely difficult and even arduous undertaking — the proportion being

from one to two good flowers to one hundred inferior and worthless plants. With this I perfectly agree, provided that the ordinary mode of obtaining the seed be pursued. We are told that it is a plant that never produces seed in considerable quantity, nor even any at all, unless in very dry and warm summers and under peculiar treatment, and even then with difficulty, arising as it is stated "from the extreme doubleness of the flower," a mistake originating either from ignorance of the natural structure of the flower and its physiology, or from want of sufficient experience in the writer. The Carnation is one of nature's most brilliant offerings to the flower garden, and although almost universally cultivated and admired for the symmetry and fine colouring of its blossoms, and for its delicate and grateful perfume, it is rarely seen in its fine varieties, some of which are really splendid and admirable, eclipsing all the flowers of its season, and making it as the pre-eminent ornament of the summer, as the Dahlia is of the autumnal months.

The scarcity of those fine flowers arises from two causes—first, from the jealousy of the few florists possessing them, who think them worthy of being exhibited and distributed to the initiated only; and secondly, from the neglect of raising plants from the seed of the best flowers, and from such only. Any florist who has sufficient energy and who wishes to derive more gratification from the culture of his Carnations, than he has yet enjoyed, may, by attending to the following directions obtain ample amusement and an abundant repayment for his time and trouble, in the production of many valuable and magnificent new flowers.

It is true that nearly all the blossoms of Double Carnations, if unaided by the hand of the gardener, will be unproductive of seed, but they are in very many cases capable of being made fertile. The organs of reproduction are in almost every instance fully developed, from the crowded state of the petals the operations of nature for production are defeated.

Every gardener and florist should know that plants are analogous to animals in their power of multiplying their kind, and require the co-operation of the sexes. In the Carnation, though ever so double, the male part of the flower or stamen is generally found, as is also the pistil of the female portion, together with the ovary, containing the embryo seeds, which may be observed by examining the blossoms of any double Carnations. The sexual distinctions are most easily distinguished. The florist, to be suc-

cessful in obtaining seed, has but to imitate nature, and by rendering his double flower as similar as possible to the single one facilitate her operations. This is done by extracting with a double pointed scissars the supernumerary petals, leaving only the outer guard leaves, taking care, however, not to injure the stamens or ovarium. This should be done before the anthers burst and shed their pollen, in order that the petals may not prevent its falling on, and being received by the stigmas; which is the usual cause of abortion in the double blossoms of the Carnation; or the florist, if he pleases, may cut away the stamens, and apply the pollen of some other admired variety to the stigmas of the flower, thus deprived of its male organs, and so fertilize the embryo seed, which is the most advantageous way of proceeding, as the variety among the seedling plants will be more marked and beautiful; and curious to say, more like the father plant, or that from which the fertilizing pollen was taken, than the mother parent, or that which produced the seed. Semi-double flowers are more easily managed this way, and may be made fruitful with the pollen of your best double flowers. The production of flowers is often effected through the instrumentality of bees and other insects, when collecting either honey or pollen from the flowers; in such cases the seed is frequently lost by neglecting to protect the blossoms from too much wet, and to extract the decaying petals, quickly lose their beauty and brilliant colouring, and being no longer needed, wither and die; they should then be cut away, lest by retaining moisture, they should communicate disease to the base of the ovarium (where the petals had been attached) which is of a spongy and light structure, and very liable to rot, if not preserved in a dry state. The stems should now be loosed from the stakes to which they were fastened, and the plants given as much air as possible. When the pericarpium has attained to half its size, it will be necessary to remove as much of the calyx or cup that contained the flower as can be done without injuring the seed-pods. The plants will now, need little further care until the maturing of the seed, when they must be carefully looked over every day, lest the pods should burst and loose their seed. When ripe, the pods should be carefully gathered and preserved unopened, until the following May, which is the most proper time for sowing, or the seeds extracted may be preserved in small well corked bottles, which is the mode usually adopted.

It has been stated, that layering Carnations prevents their

flowering as well as if it had not been done, and also prevents their producing seed. This I have found is not the case, if the plants are layered sufficiently early, the bloom will be stronger, and without doubt they will give more seed in consequence of the increased resources of the plant, each layer becoming rooted, and enabled to support itself, as well as contribute to the strength of the parent plant: they ought not, however, to be detached until the seed is gathered, else a failure of your crop will be the consequence. The seeds that have ripened in the early part of the season may be sown as soon as gathered, in a sheltered part of the garden, and the young plants placed out on a well manured south border, where (with slight protection during the very severe weather of winter) they will become strong blooming plants for the ensuing summer, thus gaining a year, as by the usual culture of the plants never show their flowers until the second year from sowing. The late saved seed is to be sown, and the plants treated in the usual way. This process may seem a little troublesome, but it is really not so; and the gratification arising from the production of very many beautiful flowers, will, I am sure, amply repay the person who pursues it.

ARTICLE VII.

ON PLANTING EVERGREEN SHRUBS.

BY THE FOREMAN OF A LONDON NURSERY.

THE season generally taken advantage of for transplanting evergreens, are spring and autumn; that is, about the month of May, after the spring frosts are supposed to be over, or the month of August, before the frosts set in. I have invariably found, that such plants as were removed in April and May, had a very great advantage over those transplanted during the preceding autumn. The reasons for this circumstance are, that such plants as are lifted in August cannot be supposed to have their young wood so well ripened off as plants that remain undisturbed at that season of the year; if the plants be checked by being transplanted at that season of the year, when the young wood is imperfectly ripened, generally in place of their pushing away vigorously in spring, the young wood is apt to die back, the leaves assume a sickly yellow appearance, and the whole plant is rendered an eye-sore. The advantage of moist weather for re-

moving the plants, and having fixed on the various situations where they are to be placed, cause the pits to be made before the plants are lifted, then take them up with good roots and balls as entire as possible; the plant, if large, should be put into a hand-barrow, made for the purpose, and carried to its destination by two or four men, according to its size or weight; let it carefully down into the pit, then adjust the roots and cover them with fine mould, then gently press the mould down with the foot, and give a slight watering through the rose of a watering pot, afterwards fill up the pit and level off; gentle waterings should occasionally be given in the course of the season, in ordinary seasons two or three waterings will be sufficient. On stiff soils, or under large trees, the plants are much benefitted by trenching and loosening the earth a few feet all around them the following winter or spring, after being transplanted. On dry soils and sheltered situations, evergreens may be transplanted during the winter months with success; but on low lying retentive soils, it is advisable to defer the transplanting of large evergreens till at least the beginning or middle of April.

ARTICLE VIII.

ON PRUNING TIMBER TREES, &c.

AN EXTRACT FROM LOWE'S ELEMENTS, &c. BY CLERICUS.

I AM aware that the subject of pruning a timber tree is not strictly Floricultural, yet their being usually found in the pleasure ground as matters of ornament, shelter, &c. will justify the insertion of some remarks on pruning them. The pruning away branches to make room from the successful growth of shrubs, is often required in the belts which form the exterior parts of the ground, as well as to give trees a proper form to make the best timber. A great deal of mismanagement often occurs by persons performing it in a most injudicious manner, and in order to afford the readers of the Cabinet an opportunity of knowing how to perform the required particulars, I have extracted the following excellent observations from Professor Low's Elements, &c. for insertion therein.

The natural tendency of many trees is to rise with a conical stem shooting forth lateral branches from the base upwards. Some species of trees, as most of the resinous and some of the willow and poplar kind do not tend to deviate from this form, the

main trunk rising erect, surrounded from the summit to the base by smaller horizontal branches. But other trees, and these may be said to comprehend the greater part of the hard wood, do not rise with the same regularity. Instead of one leading upright trunk, they send out many large boughs, which rival in size the principal trunk: such trees become forked near the base, and the principal trunk below is short, while the top is largely branched.

Now this is a form of a tree which, however conducive to beauty, is not so to utility. The main object for cultivating wood is for the timber, and the greater part of the useful timber of trees is contained in the trunk before it begins to shoot out into boughs. In the artificial cultivation of wood, therefore, it is important to produce as great a length of trunk, in proportion to the branched top, as a due attention to the natural habits of the tree will allow.

Further, it is important for the obtaining of useful timber for the purposes of the carpenter, that the trunk shall be what is termed clean for as great a space upwards as possible. To understand the meaning of this term, when a branch shoots out from the side of a trunk of a tree, a part of the vegetable circulation is carried on through that branch; and hence there is at this place an interruption of the continuity of the circulation and thus alters its course. The fibres of the branch lie in a different direction from these of the main stem, and this, when carried to a certain extent, is injurious to the texture of the wood. These twisted fibres frequently constitute as it were a distinct mass of wood within the body of the trunk. They often form what are called knots, which greatly take from the usefulness of the timber for the purposes of carpentry.

For these reasons, it is important that as great a part of the lower trunk as possible, be freed from the lateral shoots.

Nature in part performs this process. As the tree rises in height, the lower branches decay and fall off, so that there are few trees in which, even if left to themselves, there will not be a certain portion of the lower stems, cleared of lateral branches. When trees are close together, this natural falling off of the lower branches takes place more quickly, and to a greater extent, than when they are distant from each other.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. **BEGONIA PLATINIFOLIA.** *Plane leaved.* [Bot. Mag. 359].

BEGONIACEÆ. MONÆCIA POLYANDRIA.

This very large and handsome species was received in 1834 into the Edinburgh botanic garden from Berlin. It is a hothouse plant, growing to six feet high. The leaves are about ten inches across. The flowers are produced in cymes, each blossom being two inches or more across, nearly white. *Begonia*, in compliment to M. Begon.

2. **BOLBOPHYLLUM COCOINUM.** *The cocoa-nut Bolbophyllum.* [Bot. Reg. 1624.

ORCHIDÆÆ. GYNANDRIA MONANDRIA.

A native of Sierra Leone, and introduced into the country by Messrs. Loddiges, with whom it has bloomed, and the cocoa-nut scent is so powerful as strongly to perfume a whole house. The plant has also bloomed at J. Bateman's, Esq. Knypersly. Staffordshire. The blossoms are of a pale flesh colour.

3. **CLARKIA RHOMBOIDEA.** *Entire petalled*

ONAGRACEÆ. OCTANDRIA, MONOGYNIA. *SYNONYM. C. GAUROIDES.*

Seeds of this plant were sent from North West America by Mr. Douglas, and sown in the London Horticultural Society's Garden where the plant has bloomed. It is an annual, growing about two feet high. The flowers are an inch across, purple, and white near the bottom of each petal, spotted with purple. It much more resembles *Clarkia elegans*, than *C. pulchella*. Mr. Douglas has left some remarks on another species in California, closely allied to *C. rhomboidea*, viz. *C. unguiculata*.

4. **CLEMATIS FLORIDA**; var. **SIEBALDI.** *Siebold's Virgin's Bower.* [Brit. Flower Gard. 396.

RANUNCULACEÆ. POLYANDRIA POLYGYNIA.

This handsome flowering plant is a native of Japan, from whence it was introduced into this country by Dr. Siebold. It had been considered a distinct species, from that highly ornamental species, long known in the gardens of this country, viz. *Clematis florida*; but on a careful comparison, it is found to be a variety of it. The present kind deserves a place in every flower garden, or against a trellis, verandah, or wall. It is a free-growing sort, producing a profusion of blossoms, of considerable beauty. The petals are of a pale cream colour, suffused with a rich purple, having the appearance of a dark eyed centre; if the plant be grown on a dry subsoil, and in equal parts of peat and loam, it will flourish freely. It is easily propagated by layers.

5. **CYMBIDIUM ENSIFOLIUM**; var. **ESTRIATUM.** *Sword-leaved streakless variety.* [Bot. Reg. 1976.

ORCHIDACEÆ. GYNANDRIA MONANDRIA *SYNONYMIS,* EPIDENDRUM ENSIFOLIUM, LIMNODORUM ENSATUM. CYMBIDIUM STRIATUM.

The present plant grows freely in the greenhouse, where it produces a profusion of pretty, fragrant, blossoms. The petals are whitish, sepals greenish white, the labellum is spotted and marked with crimson.

VOL. V.

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6. *DELPHINIUM VIMINEUM*. *Slender upright Larkspur*. [Bot. Mag. 3593.

RANUNCULACEÆ. POLYANDRIA TRIGYNIA.

The late Mr. Drummond sent seeds of this plant from the Texas to the Glasgow Botanic Garden, where it has bloomed. It is a hardy perennial species growing about a yard high. The stems are slightly branching. The flowers are produced in rich racemes, and are of a bright azure blue colour. It deserves a place in every flower garden, being highly ornamental from July to September.

7. *DELPHINIUM TENUISSIMUM*. *Short slender Larkspur*, [Botanist.

A hardy annual plant, introduced into this country in 1836, seeds of it were gathered by Dr. Seethorp, near Athens. It has bloomed in the Liverpool Botanic Garden, producing a profusion of flowers and seeds. The plant grows to about a foot high, producing its flowers in loose panicles, they are of a violet blue colour,

8. *DIPODIUM PUNCTATUM*. *Dotted flowered*. [Bot. Reg. 1980.

ORCHIDACEÆ. GYNANDRIA MONANDRIA, SYNONYM, DENDROBIUM PUNCTATUM.

This terrestrial species of Orchidæ has been found in Van Dieman's land, as well as in New Holland, but more plentiful in the latter country. Mr. Jackson found it there flowering in December. It has bloomed in the collection of Messrs. Loddiges's. The stem is of a dark purple colour, rising from eighteen inches to two feet high. The flowers are numerous produced on a cylindrical raceme. Each blossom is of a dark purple, spotted with blood colour, and are about an inch across, producing a very pretty effect. *Dipodium*, from *dis* two; and *pons podos*, a foot; alluding to the two stalks of the pollen masses.

9. *EPIDENDRUM CORIACEUM*. *Leathery leaved* [Bot. Mag. 3595.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Charles, Parker, Esq. sent this species from Demerara to the Liverpool Botanic Garden, where it has bloomed. It had been considered by Mr. Shepherd to be a variety of *E. variegatum* but it appears now to be a distinct species; the leaves are more coriaceous, more lanceolate, shorter and less striated and acute; the spotting of the flowers are also very different. The flowers are produced in a spike, and the raceme contains from eight to ten. Each blossom is about an inch across, whitish, beautifully spotted with red. *Epidendrum*, from *epi* upon, and *dendron*, a tree; referring to its native situation.

10. *HABRANTHUS ANDERSONII* var. *TEXAMUS*. Bot. Mag. 3596.

AMARYLLIDÆ. HEXANDRIA MONOGYNIA.

Grows in a native state in Monte Video, and in Buenos Ayres. The scape is one flower. The flower is an inch and a half across, of a golden yellow colour, with the outside of the petals, striped with reddish brown. *Habranthus*, from *ubras* delicate, and *anthos* a flower.

11. *HOSACKIA STOLONIFERA*. *Creeping rooted* [Bot. Reg. 1977

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

The late Mr. Douglas sent seeds of this plant from California. It is a hardy herbaceous plant, forming a bush of a yard high, and has much the appearance of a shrub during summer. The flowers are produced in nodding umbels. Each blossom is small greenish, with chocolate coloured middles. The plant blooms in June and growing rapidly and bushy, is found to be valuable, has an under shrub, filling up vacancies between shrubs. It increases rapidly by its creeping roots.

12. LUPINUS VERSICOLOR. *Party coloured Lupine.* [Bot. Reg.

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

A hardy perennial species, a native of California, and has bloomed in the garden of the London Horticultural Society. The stems grow about two feet high, much branched. The flowers are produced in terminal spikes; the blossoms are variable between rose-colour, pale blue, violet, pink, and greenish white on the same raceme, but the lighter colours are generally towards the top of the raceme. It is a beautiful flowering species, and well deserves a place in every flower garden. The flowers are fragrant, something like the perfume of the field bean. It blooms from May to July, and produces abundance of seeds.

13. PLATYSTEMON CALIFORNICUS. *Californian.* [Brit. Flow. Gard. 394.

PAPAVERACEÆ. POYANDRIA POLYGYNIA.

An hardy annual introduced into this country by the late Mr. Douglas. The plant grows about eight or ten inches high, branches terminating with pale straw coloured blossoms, each about an inch across. The flowers much resemble the wild wood Anemone of Britain, only differing in colour. *Platystemon* from *platus* broad, and *stemon* a stamen, alluding to the broad filaments.

14. RHODENDRON ARBOREUM var. CINNAMOMEUM. *Cinnamon coloured tree Rhododendron.* [Bot. Reg.

ERICACEÆ, DECANDRIA MONOGYNIA.

In 1822 Dr. Wallich sent to this country, from India, a quantity of seeds of this plant, one of which has bloomed in the nursery of Messrs. Rollison at Tooting, Surrey. The present variety is very like the white sort which has previously been noticed and been cultivated in our gardens for ten or twelve years, but the clusters of flowers are more compact, and the purple spots on the white petals are larger, darker and more numerous. The white of the flower is not quite so clear as in the old kind. The present kind deserves a place in every shrub border.

15. BLUMENBACHIA MULTIFIDA. *Multifid-leaved.* [Bot. Mag. 3599.

LOASÆ. POLYDELPHIA POLYANDRIA.

A native of Buenos Ayres, and discovered there by the late Dr. Gillies. It has since been discovered by the late Mr. Tweedie, and by him seeds were sent to the Glasgow Botanic Garden. This species is very distinct from *B. insignis*, being a much stronger growing plant, more compact, and more hispid with strings. It is perfect hardy. The leaves are much larger, but like *B. insignis*, they are much lobed. The flowers are about an inch across, white, with a yellow, and red centre.

16. BRODIAEA GRANDIFLORA. *Large flowered.* [Botanist.

LILIACIA. TRIANDRIA, MONOGYNIA.

A bulbous rooting plant, a native of Georgia, on the north-west of America. Bulbs were sent by the late Mr. Douglas, to the London Horticultural Society. The flower stem rises to eight or ten inches high, terminating with an umbel of about six flowers; each flower is campanulate, about an inch across, of a pretty blue colour. It is quite hardy and flourishes freely if grown in a shady situation, and planted in peat soil. *Brodiaea*, named in compliment to James Brodie, Esq. of North Britain.

17. SILENE CHLORÆFOLIA. *American catchfly.* [Bot. Reg. 1989.

SILENACEÆ DECANDRIA TRIGYNIA.

A hardy perennial plant, producing numerous pretty flowers, of a pure white, delightfully fragrant. Each flower is rather more than an inch across. It is a most desirable plant for either the flower border or a rock work.

PART III.

MISCELLANEOUS INTELLIGENCE.

 QUERIES

ON THE COLOURS OF DAHLIAS.—The difficulty which occurs in ascertaining the real colours of Dahlias, causes very considerable confusion, and unpleasantness between exhibitors have frequently arisen in consequence. Would it not effect the desired object if each Floricultural Society were to have a specimen card of colours, and for each exhibitor to purchase one, or have them gratis, at the time each exhibitor enters for competition.

If such cards of colours were obtained by every society from one source, a general correct understanding of each colour would prevail.

Middlesex, Aug. 18th.

W. W.

ON PRUNING RHODODENDRONS.—What should be done with respect to Rhododendrons when they grow straggling, as I am afraid of cutting them, lest I should injure the bloom for next spring. If some reader of the Cabinet, who has had practical instruction, would favour me with a reply, I should be greatly obliged.

KALMIA.

[We have frequently cut in straggling growing Rhododendrons, and they have made fine showy plants by the second summer. The time we have cut in the branches was early in April. Several young shoots were generally produced upon each branch, and lest they should be too close we thinned out a portion, and left not more than three or four. By cutting in the branches at this early season, the plants were not only more certain to push shoots than if cut late, but the young shoots had time before the autumn to grow vigorously, and be sufficiently ripened to withstand the effects of severe frosts without injury; whereas, if cut late in summer, the young shoots would be so tender as to be very liable to suffer by frost.

The young shoots produced by cutting in the branches, has never produced bloom till the second season. Where a plant has a few short branches, and a number of straggling ones, the latter may be cut and the former left, which, if they have flower buds upon them, will produce a bloom, and the branches cut in push new shoots.—CONDUCTOR.]

 REMARKS.

NEW PLANTS, &c.—*Calchortus venustus* and *C. splendens*, these are now in bloom, and are highly deserving a place in every flower garden, we gave figures of them soon after their introduction into this country.

Spirea Japonica. This new species, producing white flowers, is very neat and handsome, and well deserves cultivation. It is a hardy herbaceous plant, flowering very profusely.

Anagallis Philippii. We gave a figure of this plant some time ago. It is a most profuse bloomer, of a splendid blue colour, and the flowers of a large size. It is a charming plant for the greenhouse or open border. A bed of it is splendid.

Pentstemon Murryanus, is a most splendid flowering plant, producing when grown in the open border in summer, spikes of flowers six feet high. We have seen some even higher.

ON THE SENSITIVE PLANT.—The movement of the leaves of the *Mimosa pudica* have their origin in certain enlargements, situated at the articulation of the leaflets with the petiole, and of the petiole with the stem. Those only which are situated in the last articulation are of sufficient size to be submitted to experiment. If, by a longitudinal section, the lower half of this swelling be removed, the petiole will remain depressed, having lost the power of elevating itself:—if the superior half be removed, the petiole will remain constantly elevated, having lost the power of depressing itself. These facts prove that the motions of the petiole depend on the alternate turgescence of the upper and lower half of the enlargement, situated at the point of articulation: and that contractibility is not the principle of these motions.

If one part of the plant be irritated, the others will soon sympathise, or bear witness, by the successive falling of their leaves, that they have successively felt the irritation.—thus, if a leaflet be burnt slightly by a lens, the interior movement which is produced will be propagated successively to the other leaflets of the leaf, and thence to the other leaves on the same stalk. A very clever French experimentalist, Mons. Dutrochet, found.

1st—That this interior movement is transmitted equally well, either ascending or descending.

2nd—That it is equally well transmitted, even though a ring of bark has been removed.

3rd—That it is transmissible, even though the bark and pith be removed so that nothing remain to communicate between the two parts of the skin: except the woody fibres and vessels.

4th—That it is transmissible, even when the two parts communicate merely by a shred of bark.

5th—That it may be transmitted, even when the communication exists by the pith only.

6th—But that it is not transmissible, when the communication exists merely by the cortical parenchyma.

From these very interesting experiments, it results that the interior movement produced by irritation, is propagated by the ligneous fibres and the vessels.

The propagation is more rapid in the petioles than in the body of the stem:—in the former it moves through a distance of from three to six tenths of an inch in a second; in the latter, through from eight to twelve hundredths of an inch, during the same portion of time. External temperature does not appear to exert any influence on the rapidity of the movement, but very sensibly effects its extent.

Absence from light, during a certain time, completely destroys the irritability of the plant. Such change takes place more rapidly when the temperature is elevated, than when it is low. The return of the sun's influence readily restores the plant to its irritable state. It appears, therefore, that it is by the action of light, that the vital properties of vegetables are supported, as it is by the action of oxygen that those of animals are preserved, consequently, etiolation is to the former what asphyxia is to the latter.

Gardener's Gazette.

C. MACKENZIE.

THE CAUSES OF THE VARIETY AND VIVIDNESS OF COLOURS IN FLOWERS.—The petals of flowers do not owe their beauty to the colour that paints them; for that, when drawn off, is dull and dead; neither do they owe their brilliant tints to the skin that covers them. Their lovely appearance is derived chiefly from the bubbles of water which compose their pabulum. Receiving the sun's rays, they are enlivened and brightened by reflection and refraction from those drops of water; and from that spot or point of light being seen in every bubble, and striking to the focus underneath. By these means the whole flower would at times be one blaze of light had not nature to soften the same, covered the petal with an upper and an under skin which curtails their diamond-like rays, and leaves them, instead, a lightness and beauty unequalled by the most exquisite art of the painter.

In order to prove that bubbles of water are the true cause of the beauty which flowers transmit, either in vivid flashes or tender tints, to the human retina; we have only to take the duller colour that was ever mixed or painted, and filling a small glass bubble with water, let the rays of the sun fall through it on the said colour, it will become the brightest and most beautiful imaginable, and exactly resemble the tint of flowers. The moist petal is so filled with water, that it only excites our astonishment how such a thin gauze like matter can contain such a quantity of liquor, and yet the flower reposes on the hand without wetting it.

To shew, however, that some of our flowers may owe their beauty to other contrivances besides pabula filled with water, we may instance a common one which adorns our fields. viz. the ranunculus or butter cup. The petals of this very pretty wild flower appear to be varnished, but, on examination, we find that this is owing to a white powder resembling magnesia which lies between the pabulum and the upper skin. "To try the effect," says Mrs. Ibbetson, whose experiments on the physiology of plants have placed her in the first rank of natural philosophers, "I got a quantity of extremely small glass bubbles containing water blown for me, and I placed them in a petal, in rows: although infinitely larger, yet they appeared to be a petal greatly magnified. I covered them with a piece of gauze, painted so as to resemble a flower, and truly did it imitate the sort of brightness and brilliancy which it was intended to represent."

GARDENER'S GAZETTE.

LONDON HORTICULTURAL SOCIETY. August 1st.—Dr. Lindley read a paper from Mr. J. Ingram, gardener at Southampton, on a simple and effective mode of killing the red spider, thrip, scale, and green fly, without injury to the plants. It merely consisted in putting the pots into a frame well closed, and then putting laurel leaves well bruised between them, when in the course of one hour, the whole of the red spiders and green flies would be destroyed by the odour: the plants were then to be removed into a hot place. For a house twenty feet by twelve, the quantity of two bushels of leaves would be amply sufficient, which might be bruised in the place which was to be covered and surrounded by matting, so as to prevent the escape of the odour. For the destruction of thrips and scales about eight hours was sufficient, and the experiment succeeded best at night; the plants afterwards to be removed to a hot place, when the insects would soon die and drop off.

Dr. Lindley read the following address from the Council of the Society to her Majesty, which had been presented on the throne by the Duke of Devonshire, requesting her to become the patroness of the society.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

Most gracious Sovereign:

We your Majesty's most dutiful and loyal subjects, the president, vice presidents, and council of the Horticultural Society of London, beg leave most respectfully to approach your royal presence, and in the name of the Society to offer our sincere condolence on the decease of his late Majesty our gracious patron.

Yet whilst in common with all classes of his Majesty's subjects we deplore the loss which the nation has sustained, by the removal of so munificent a patron of science, we are not the less sensible of the gratitude we owe to Divine Providence, for having blessed us in the person of your Majesty, with a successor, whose accomplished mind and enlightened views, are the theme of universal applause, and eminently calculated to adorn the throne of a kingdom, now justly celebrated above all others for the splendour of its gardens, and the devotion of its inhabitants to the peaceful occupation of horticulture.

While we humbly presume to take credit to our society for the improvement in public feeling, which has taken place in this respect, we gratefully acknowledge the service which we have derived from the royal countenance; and as the love of natural beauty, and the cultivation of the fine

arts are especially innate in the female breast, we confidently anticipate that a pursuit which is so completely identified with the advance of civilization, will flourish with renewed vigour, under the fostering auspices of your Majesty.

We therefore beg to offer our most heartfelt congratulations on your Majesty's accession to the throne of your ancestors, and venture humbly to solicit your Majesty's renewal of that patronage which has been accorded to this society by your royal predecessors since the period of its institution, and earnestly pray that your Majesty's reign may become illustrious by the general cultivation of all those arts of peace which are so eminently conducive to the wealth and beauty of the country, and the enjoyment of all classes of your Majesty's subjects.

Given under our corporate seal, at the rooms of the Horticultural Society, Regent Street, London, 22nd day of July, 1837.

Signed on behalf of the council, DEVONSHIRE.

A letter was read from his Grace, addressed to the secretary intimating that her Majesty has signified her intention to be the patroness of the society.

The first objects pointed out to the meeting were several orchideous plants contained in different collections in the room. The most interesting of these were *Zygopetalum rostratum*, from Mrs. Lawrence, a specimen of the same from Mr. Bateman, as also of *Acropera Loddigesii*, *Stanhopea insignis*, and *Gongora atropurpurea*. Mr. Pratt, of Cheshunt, exhibited a strange and interesting variety of *Stanhopea insignis*, and Mrs. Marryat, a new variety of *Oncidium Carthaginensis*, a little modified in the formation of the flowers. The most remarkable specimen was, however, *Cattleya crispa*, from Mr. Paxton, than which it would be difficult to find anything displaying more skill or beauty in cultivation, whether in shape, form or flower. It had been previously never seen with more than three, four or five flowers, but the present specimen contained seven, in which the interesting characters of the plant were all apparent. Accompanying this were three specimens of *Stanhopea insignis*, the cultivation of which had never before been so perfect but in the hands of Messrs. Loddiges, and these with the former specimen, exhibited the display of no ordinary skill.

Mr. Cox, of Cranford exhibited a beautiful tray of Carnations and Picotees; Mr. Hogg, a tray of Carnations; Mr. Salter, of Shepherd's bush, several Dahlias which were very good for the season. Mrs. Marriot exhibited a tray of Verbenas, of almost every variety and colour, *Tasconia pinatispula*, and *Campanula fragrans*, a plant which has lately come a great deal into cultivation in the neighbourhood of London, although it was thought it would be unsuccessful. It grows wild in Naples, and other parts of Italy on rocks and other wild places, having a magnificent appearance, covering the crevices of the former with its large and beautiful blue flowers. Mr. Hooker exhibited a large collection of roses. Mr. Moore, gardener to Miss Garner of Wickham, Hants, exhibited a new Orchidea from South America, a variety of *Petunia* from *P. Nyctaginiflora*; and a variety of *Dianthus* from *D. Superbus*.

From Mr. Lawrence were 13 Heaths, many new and interesting varieties, particularly *Erica viridiflora* bearing a small and neat green flower.

REFERENCE TO PLATE.

LOBELIA PROPINQUA, a most splendid flowering species quite hardy. It likes a deep rich soil, and as all the other Lobelias of its section do, plenty of water in the growing season. If thus attended to, it will produce numerous spikes of flowers rising to the height of four or five feet. It deserves a place in every flower garden or greenhouse.

LOBELIA CÆRULEA GRANDIFLORA, this fine Hybrid variety, is quite hardy, producing numerous flower spikes, which rise from two to three feet high, and make a very striking contrast when placed near to the *Propinqua* ful-

gens, &c. Like those kinds, the present is free of production, and easy to cultivate,

KENNEDIA MARRYATTI, Mrs. Marryatt's *Kennedia*, a most beautiful flowering greenhouse climber, well meriting a situation in every collection of this tribe of plants. It flourishes well in sandy peat, having a good drainage.

FLORICULTURAL CALENDAR FOR OCTOBER.

PLANT STOVE.—Plants of Cactuses that have been kept in the open air or greenhouse, now put into the stove, will bloom immediately.

GREENHOUSE PLANTS.—Those plants that were removed into the greenhouse last month, should have plenty of air given them every mild day; but the lights should be close shut up at night, also when cold, damp, wet, or other bad weather prevails, excepting a little at the doors, about the middle of the day. The plants should not be watered in the "broad-cast" manner as it is termed; but should be attended to singly, so that no plant may be watered but what is actually dry. Water should not be given in the evening but in the early part of the day, so that damps may be dried up before the house is closed. If watered in the evening, the damp arising during the night will cause the leaves to decay, and encourage moss, lichens, &c. upon the soil. This will invariably be the consequence, unless fire heat be applied to counteract the effect. The soil in the pots should frequently be loosened at the surface, to prevent its forming a mossy or very compact state.—Camelias, if wanted to flower early, should be placed in a stove.

FLOWER GARDEN.—&c. Auriculas must now be removed to their winter habitation, all dead leaves must be picked off as they appear, or the plants will be liable to injury from rotting, &c. Carnation layers potted off should be placed for protection during winter. Offsets of the herbaceous kinds of *Calceolarias* in beds or borders, should now be potted off, having well-drained pots and a light soil. The plants should be kept in a cool frame, or a cool greenhouse; very little water must be given them, or they will damp off. Cuttings of all kinds of greenhouse plants that have been grown in the open border, in beds, &c., such as *Heliotropes*, *Geraniums*, shrubby *Calceolarias*, &c. should be taken off as early as possible in the month, and be stuck in heat, in order to have a supply of beds, &c. the next year. If frost is likely to cut off the tops by the end of the month, the plants should be taken up, and placed very closely in boxes, large pots, &c. for preserving during winter. Water freely after potting off, but little afterwards at the roots till the plants have struck root, they may occasionally be sprinkled over the tops. Do not place the plants in heat, to cause them to strike, for if this be done, most of the plants will fail, a cool frame or greenhouse is suitable. Hyacinths and other bulbs, should be potted early in the month, for forcing, &c. Seeds of *Schizanthus*, *Stocks*, *Salpiglossis* and similar kinds of plants, desired to have in flower early next season, should be sown the first week in the month in pots, and be kept from frost during winter. Seeds of *Pansies* may be sown early in the month, in pots, and be protected in a cool frame, also plants taken up and to be protected unless they be grown in a sheltered dry situation. Pinks, if not already planted off should be done early. Perennial and biennial flowers, may be divided, and planted off where intended to bloom next year. Flower beds, borders, &c. should be dug, and an addition of fresh soil be laid in them so as to raise the surface, and the roots of all plants may be covered, to be a protection during winter; this should be attended to by the end of the month. Any tender kinds of border plants that are liable to injury during winter, should be potted and placed for protection. To *Dahlias*, a cover of soil round the roots should be given, lest a sudden frost coming should injure the crown buds; seeds should be collected before damaged by frost. Seeds of all kinds of flowers not yet gathered, should be collected early in the month, or they will be liable to injury by frost.

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Lobelia azarea.



Pentstemon gentianoides.



Nictallia grandiflora
superba.



Cuphea sidemoides.

THE
FLORICULTURAL CABINET,

NOVEMBER 1st, 1837.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON PRUNING, THINNING, &c. OF TREES IN PLANTATIONS, WITH
OTHER REMARKS UPON THEM.

BY MR. JOSHUA MAJOR, LANDSCAPE AND ARCHITECTURAL GARDENER,
KNOSTHORPE, NEAR LEEDS.

I HAVE taken the liberty of sending you a few remarks on the very defective manner in which plantations are generally managed, as far as regards ornament, hiding disagreeable objects and effecting convenient and secure places of retirement; trusting through the medium of your widely circulated Cabinet, should you deem them worthy of insertion, that my remarks may have some tendency towards abolishing the evil I have to complain of.

I find wherever I travel, and in whatever country my profession calls me, very great and glaring defects in plantations, arising in nine cases out of ten from the want of judicious and early thinning. Now, could we but persuade gentlemen, and persons who have the management of such plantations to commence thinning a few years after planting, and to continue to do so, at least once in two or three years, as it is necessary, the defects I complain of would be prevented, and the objects I have in view would be effectually attained.

VOL. v.

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The method I would recommend to be pursued, is as follows :

1st, Make choice of such trees, as are likely to remain where they are planted, and at each successive thinning, clear off a few of their lower branches, Wych, Elm, Birch, Lime, &c. should be trimmed to the lowest stem ; and the formal upright kinds, such as the Horse-chesnut, Sycamore, Mountain-ash, &c. to the shortest stem.

2nd, Cut down from time to time, as occasion requires, such other trees as appear to crowd these, by this means the adopted plants will have room to bestir themselves, and they will be found severally to form extensive and massy branches, calculated at once for ornament and use, and one single tree, will eventually afford a screen equal to a hundred of these neglected skeletons we are at present confronted by wherever we turn ourselves. I do not mean that plantations should be always equally thinned : let the trees be occasionally at various distances ; for instance, two, three, four, five, or more may stand in a group, set from three to five yards from each other ; which, although near together, may still become fine ornamental trees, provided sufficient room be left all round to allow their branches to extend with freedom ; and indeed, in order to produce a proper effect, and to have groups and masses of different sizes, different distances must be adopted ; instead of which, we generally find plantations almost totally neglected for the space of fifteen or twenty years, and sometimes even longer, and that too, although the trees were planted at first at no greater distance than three or four feet from each other. Such mismanagement must necessarily cause the branches to decay and fall off ; and consequently leave the trees little better than mere naked poles, but miserably ill calculated to form a screen, and ornament the surrounding landscape.

The other day on a journey into Derbyshire, I was forcibly struck with the necessity of something being immediately said on a subject so important.

I noticed on each side of the high road plantations that have stood at least thirty years ; the trees were from three to four feet distant ; in consequence of which they had long been divided of their principal branches, which rendered them entirely useless as a screen, for which purpose they appeared originally to have been planted. I am not sure whether they did not belong to some nobleman, but, however, it is no uncommon thing

for similar defects to present themselves in large domains, even where woodmen are kept, which certainly reflects no credit on the owners.

I frequently find it a difficult matter to persuade gentlemen to allow their plantations to be thinned, and their trees to be cut down; but wherever I have prevailed, the alterations have never failed to give entire satisfaction. I was called in some few years ago, to alter the grounds of a baronet; who, while I was inspecting, directed my attention in particular to a plantation of at least fifteen years standing, formed for the purpose of concealing the kitchen garden. This partly from want of thinning, and partly owing to the prevalence of that odious tree (the black Italian Poplar), appeared to be a complete wilderness. I immediately directed the gardener to mark with white paint at least one half of them to be cut down. The baronet expressed his surprise at the number, and said he was sure Lady ——— would be distressed at the idea of so many being removed; however, it was agreed upon that they should be taken down before her ladyship took her morning walk. I left before the operation was performed; and to my great surprise, although all my other plans had met with their unqualified approbation, in the course of a few days I received a letter stating, that only one half of the number I had caused to be marked, had been cut down, and that the rest were to remain till I had paid another visit; and hoping that I should consider that sufficient, so reluctant was my kind employer to cut down his trees. Notwithstanding which, I still persevered in recommending the rest to come down, which was very reluctantly agreed to, and down they came, and undergrowths of common Laurels, Hollis, Yews, Dogwoods, to be introduced in their room; for it may naturally be supposed that their having been suffered to crowd each other so long, would entirely prevent them from ever assuming the form and beauty they would otherwise have done, had early pruning been attended to. My advice was followed and the nobleman has since called upon me, and expressed himself highly gratified with the improvements produced. On these grounds were several masses of silver firs, which would certainly have been the finest of the kind I ever saw, had they been properly managed; they were seventy or eighty feet high, but I am sorry to say it, destitute of branches to within ten or twelve feet of the top, instead of being furnished nearly to the ground, as

they might have been, had they been planted at a proper distance at first, and judiciously thinned afterwards.

A similar feeling prevailed with another baronet a year or two ago, who, although he professed to know a good deal about Landscape Gardening, had not acquired sufficient of the art to enable him to preserve either the form, or grandeur in the growth of his trees; for many old ones about the house were crowded to excess, and drawn to an immense height nearly destitute of branches; and there they remain to this day, as if to reproach him for his obstinacy.

I am employed at present in laying out a park and pleasure grounds, and the only obstacle that has occurred to frustrate the whole of my designs, is that of cutting down trees. The opposition rose on the part of the lady of the house, who, I must confess, possesses considerable taste, though in this particular case she was decidedly wrong. I was two years in obtaining her consent to remove two trees standing in a large mass, in order to open out a narrow vista. At last, on a late visit, I so far prevailed, by the aid of another gentleman, who happened to be dining with us, as to be allowed to remove one first in order to see the effect; and although this shewed a good deal of my object, I was not allowed to take down the other. However, we hit upon another expedient, we contrived to cut the top off the other, so as not to disfigure the tree, and this entirely answered the end I had in view, and opened one of the prettiest vistas I ever beheld: in short we were all highly delighted with it. I have adduced these instances which have come under my observation, to shew the necessity of drawing the attention of gentlemen towards the management of their trees, as far as regards effect and ornament, and to encourage them to dash away their fears, and not to allow them to predominate to the injury of the landscape.

These are not fanciful speculations, they are the result of much practice and careful observation. Before I conclude, allow me to remark that the general practice of introducing nurse plants, as they are termed, into plantations, seldom proves to answer the purpose intended, resulting in a great measure from the want of early attention. The Italian Poplar and the Larch, for instance, are of such rapid growth, that in four or five years they will overpower, and materially injure the Oak, the Beech, and in short, nearly every other kind of tree; consequently, at that

period care should be taken to relieve such by lopping off the branches of the nurse plants, and cutting down others as may be required.

I am decidedly against the introduction of the black Italian Poplar, either as a nurse plant for shelter, or any other purpose, unless it is quite certain that the whole are to be removed in due time: as it is at no period of its growth to be admired, but generally exclusively ugly. When young it never harmonizes with other trees, and as it advances in growth, it soon becomes disproportionate, top heavy, and in the end so over-balanced as invariably to bear on one side, and frequently to become nearly prostrate. Indeed I am opposed to the family of Poplars generally, except the Lombardy, which I should be sorry to condemn; on the contrary, when judiciously planted in groups, of from three to fifteen, in deep vallies, in dense masses of trees, or woods, and in connexion with churches or other buildings, especially those of the Gothic and Elizabethian style, a happy effect will be produced: but the country generally has become barbarously disfigured, by the introduction of most of the other kinds, (but more especially the black Italian) that could I raise a hue and cry against them, so as to have them totally banished from the country I should consider I had done justice to my own feelings, and to those of every one possessing true taste to Landscape scenery; but am I not speaking too hastily? Is not the Poplar the darling of a Professor of Landscape Gardening, who has scarcely known how to say enough in its praise? Ought he not to possess a taste for Landscape Gardening, he ought, and does, but what kind of taste is it, such a one it is hoped he now heartily repents of, let him look round and see what frightful objects he has reared in many parts of the country; and surely his conscience will tell him he has done mischief enough already, and the only way in which he can redeem his credit with the country, is to recommend the axe instantly to be laid to their roots, and at one fell sweep, exterminate them all.

I will now conclude with a hope that my early remarks on thinning, &c. may be of service, if not to those who have plantations of long standing, at least to those who are forming new ones—and advising that they will above all things keep out that frightful object, the black Italian Poplar.

J. MAJOR.

ARTICLE II.

A LIST AND PROPORTIONS OF COMPOST SUITED TO THE SUCCESSFUL GROWTH OF THE PLANTS AS DESCRIBED IN THE FOLLOWING LIST

BY AN OLD SUBSCRIBER, PIMLICO.

AGREEABLY to my promise I now send you a list of composts for plants, which I have selected from the excellent practical observations given upon each, in various papers that have been inserted in the Cabinet; and I doubt not but bringing the subject into this condensed form, will be a ready reference, and prove useful to the readers of the Cabinet.

COMPOSTS FOR PLANTS.

Name.	Loam.	Peat.	Hot-bed Manure.	Vegetable Mould.	Sand
Acacia	1	1	0	0	1-half
Anagallis	2	1	0	1-half	1-4th.
Anemone	1	0	1	1	1-3rd
Annuals	2	0	1	0	0
Arctotis	1	1	0	0	0
Asters	1	0	Tf Ash. 1-6	1-sixth	0
Auriculas	1	0	Cow D. 1 each.	1	1-4th.
Banksias	1	1	0	0	1
Bouvardias	2	1	1-half	1-half	1-4th.
Bulbs, Cape	1	1	0	1	1
Do. Dutch	2	0	1 C. D.	1-half	2
Brugmansia	2	0	1	1	0
Begonias	1	1	0	0	0
Calceolarias	1	1	1 fourth	0	0
Campanulas	1	1	1	0	0
Camellias	1	1	1 half	1-half	1-half
Carnations, Pinks & Picotees	2	0	1	0	1-4th.
Chrysanthemums	1	0	1	0	0
Cistus	1	1	0	0	0
Commelinas	1	1	0	0	0
Correa, speciosa	1	1	0	0	1-4th.
Cyclames	1	1	0	0	1-4th.
Cyrilla, pulchella	1	1	0	1	1-half
Dahlias	2	0	1	0	1-3rd
Daisies	2	0	1	1	0
Eccremocarpus, scabre....	2	0	1	1	0
Epacris	0	2	0	0	1-half
Ericas	0	2	0	0	1
Eutaxias	2	1	0	1-half	1-4th.
Fuchsias	2	1	1	1	0
Gardenias	1	2	0	2	0

Name.	Loam.	Peat	Hot-bed Manure.	Vegetable Mould.	Sand
Gloxinias	1	0	1	0	1
Green-house Perennials....	2	1	0	1	1
Heliotropes	1	1	1	1-half	0
Hydrangeas.....	2	0	1	1	0
Lobelia	2	0	0	1	1
Lophospermum, scandens..	2	0	0	1	1-half
Maurandia	2	0	0	1	1-half
Mesembryanthemums	1	1	0	0	1
Mignionette.....	1	0	0	1	1
Mimulus.....	2	0	1	1	1-half
Myrtles } hot-bed dung rot- } ted to mould.	0	0	0	0	0
Nierembergias	2	0	0	1	1-half
Oxalis	1	2	2	0	0
Oranges	4	0	0	1	0
Pansies	2	1	1	0	0
Pelargonium	1	1	1	1	0
Pimelias	0	2	0	0	1
Polyanthus	1	0	1-8th.	1-8th.	1-8th.
Primula sinensis	1-half	2-3rds.	0	1	1-3rd
Ditto. common	1	1	0	1	0
Ranunculus	1	0	1	1	1-3rd
Roses, Climbers.....	1	0	1	0	0
Ditto. Noisette	1	0	1	0	0
Ditto. Perpetual	1	0	1	0	0
Ditto. Odorata	1	1	1-half	1-half.	0
Ditto, Standard	1	0	1	0	0
Salpiglossises	1	0	0	1	1-3rd
Salvias	1	1	1	0	0
Senecio, elegans	1	0	0	1	0
Succulent } 2 turfy, & 1-part Plants } Lime Rubbish } from old buildns.	0	0	0	0	0
Tuberoses	2	0	1	0	1-4th.
Tulips in pots	2	0	C.D. 1.	1-half.	2
Ditto, in Borders	3	0	1	1	1-half
Verbenas	1	1	1	0	0
Violets	1	0	1	1	0

ARTICLE III.

ON THE CULTIVATION OF ALSTROMERIAS.

BY MR. W. SCOTT, GARDENER TO CHARLES BARCLAY, ESQ. M.P., F.H.S.

As the *Alstromerias* exhibited by Mr. Barclay, on the 7th of June, 1834, at the Gardens at Chiswick, were so generally admired that

the Society's large silver medal was awarded for them, we trust a description of his mode of treating them may not be unacceptable to our readers. "When I first came to Bury Hill," he says, "in April, 1831, I found several varieties in small pots of the size generally termed sixties, which were suffering from being kept too moist, and *Alstromeria tricolor* or *Flos Martinia*, and *pulchella* or *Simsii*, were planted in the border in front of the stove. Being very partial to the genus, although I had never seen any of the varieties before, except *ligtu* and *peregrina*, I began immediately to turn my attention towards them. Being well aware, from what I had seen of the two kinds with which I was acquainted, that they require rest for a few months in the course of the season, I removed all the plants I could find, (which, as well as I can recollect, were *Hookeri*, *pulchella*, *pallida*, *peregrina*, *acutifolia*, *peregrina alba*, *psittacina*, *edulis*, *ligtu*, and a variety from Mr. Nuttall, raised by him from Peruvian seeds, and which had never flowered here,) to a small pit in front of the pine stove, giving them no water till the earth about their roots got quite dry; as soon as they began to recover, I potted them in the size called forty-eights, and kept them on a shelf against the back wall of the greenhouse, about three feet from the top lights; and although I lost *hookeri*, *peregrina alba*, and *edulis*, I had the satisfaction of seeing the others thrive much better than they had done the previous year. I also took up from the border in front of the stove, *tricolor* and *pulchella*, and gave them the same treatment. When the leaves began to decay, at the end of July or beginning of August, I withheld water, and allowed the plants to rest till the beginning of November, 1832, when they again began to vegetate: I then repotted them, and gave them every encouragement, in rich mould composed of loam, rotten dung, and leaf mould, with a little sand; this I find to be the best compost for growing them in. As they filled their pots with roots I shifted them progressively to a larger size: and had in June, 1833, the pleasure of flowering the species from Mr. Nuttall and *pallida*, for the first time since they had been at Bury Hill; and I succeeded in growing *tricolor* to the height of two feet three inches, well covered with flowers: none of my pots that season were larger than what are termed sixteens. When the flowering was over and the leaves beginning to decay, I then resorted to the plan of drying, or resting, the plants till the following November; I afterwards gave them the same course of treatment as before; but as the

roots had attained a greater degree of strength, the size of the pots was enlarged, until some of the stronger varieties were planted in the size No. 6, in which they arrived at the state in which they were exhibited at the Society's garden in June, 1834. During the time of growing, I keep them on a shelf, or trellis, in front of the greenhouse, having upright lights about five feet high, and I gave them plenty of air, carefully avoiding the least application of heat, which would draw them up weak, cause the flowers to be much smaller, and very much injure their colours. By these means I have had them continue in bloom for full four weeks."— Read before London Horticultural Society.

ARTICLE IV.

ON PRUNING TIMBER TREES, &c.

(Continued from page 240.)

In natural forests the trees rise with very tall upright stems, and are gradually divested of all their branches below to a vast height. It is from natural forests accordingly that our finest, tallest, and most valuable timber is derived.

But in the artificial culture of wood we cannot imitate the natural process, and allow the lateral branches to fall off by themselves. In the culture of wood we must admit the air to the trees, by keeping them at a distance from each other: and under these circumstances, the tree tends greatly to shoot out into branches, and thus to produce a smaller growth of upright stems, as well to have a smaller extent cleared of branches towards the base.

In the cultivation of wood, then, we must generally resort to artificial means to form the tree to what we wish it to possess. We must then endeavour to promote the upright in place of the lateral extension, and then to have a sufficient portion cleared of lateral branches.

Further, the later branches should be taken off at as early a stage in the growth of the tree as is consistent with its health; for it is to be observed, that when a branch shoots from a tree, the twisting of the fibres begins at the point where the branch had originated, and not, as from a cursory inspection might be supposed, from the surface of the stem.

Thus, in a following section of a portion of the stem, a lateral branch having first appeared on the surface, continues to increase

in thickness as the main stem increases, and in the same manner, namely, by the adding each year of a layer of wood all round. It does not therefore commence at the surface of the tree, but in the interior, and each year increase in diameter. The sooner, therefore, that this branch is removed, the less will be the twisting of the main stem at this part.

As in the practice of pruning there are two distinct purposes to be aimed at; first, giving the vertical tendency to the tree; and, second, obtaining as great a portion as possible of clean stem; so there are two periods in the growth of the tree at which these objects are to be attended to. The first in the order of time, is giving the vertical tendency to the tree, and the second, the denuding it of its lower branches.

Until the tree has attained the height of fifteen or sixteen feet, the only object that need to be attended to is to give it the upright tendency in question, and to prevent its becoming forked.

The pruning for this purpose consists in merely shortening such branches as may be rivalling the leading shoot, or stretching out laterally with a growth disproportioned to that of the others. Frequently the mere nipping off of the terminal bud will be completely effected by shortening the shoot, making it about half the length of the shoot above; this is the sole purpose of pruning during the first period of the growth of the tree; and it is to be observed, that if a tree be of itself tending to grow upright and without forking, no pruning, even of this simple kind, is required. For of all pruning it is observed, that it is a violence done to the plant, and is to be avoided as much as possible. By cutting off branches and leaves, we cut off organs of nutrition. We do not prune that we may increase the quantity of wood, for the operation has quite a different tendency and effect; but we prune that we may give to the tree that form which is calculated to produce the greatest quantity of timber in the proper place.

The other branch of pruning, and next in the order of time, consists in denuding the lower part of the trunk of branches, so that there may be obtained a sufficient extent of clean wood. Although, for the reasons given, it is important that the taking off these branches be at as early period as possible, yet this must be done always under the conditions necessary to preserve the health of the tree. The tree should, in the first place, have attained sufficient strength and age to bear the being deprived of

its branches; and in the next place, the process should be carried on so slowly as not to effect the healthy growth of the plant, and so gradually, that it may have vigour to cicatrize, or cover with bark, the wounds that have been made upon its surface. The period when we may safely commence this process of denudation, is when the tree has attained the height of fifteen or sixteen feet.

Now, every tree adds to the length of its leading shoots and branches from buds which grow on the end of the shoots. Every year a new shoot is made from the end of the buds, of a length proportioned to the vigour of growth of the plant. The shoots thus formed in one year, produce each a bud, which, in like manner produce shoots in the following year; and thus while the tree is growing, there is a continued increase of the length of its leading shoots and branches. Further, when the annual shoot of any branch is produced, there is usually sent forth at the place where it originates one or more lateral shoots, so that there is a succession of branches, or tier of branches from the base to the summit. Were these lateral branches not to fall off, we could, by means of them, ascertain the age of the tree, and in the case of many of the *Coniferæ*, we can frequently ascertain the number of years which they have lived, or that each individual branch has taken to grow, from the number of these annual shoots alone. A knowledge of this mode of growth will conduct us to a simple rule in practice for removing, without violence, the lower branches of the trunk.

When we commence this process of pruning off the branches of the stem, let us cut off the lowermost branch or tier of branches, that is, the branch or branches of one year's growth, and no more: in the second year let us cut off a second tier, in the third year a third tier, and so on. In this manner, while the tree in each year makes one shoot vertically, the lateral shoots of another year is cut off below. Thus, a tree having made fifteen shoots, and having risen, we will suppose, to the height of fifteen feet, we commence the process of pruning by cutting off the lowermost set or tier of branches. The tree then makes a shoot at the top, so that while we have cut off the lateral shoots of one year, another year's vertical shoot will be made. The next year we prune away the branch or tier of branches, and again the tree makes a shoot at the top. In the third year we cut off as before, and again the tree makes a shoot upwards; and so we

take off each year the lateral shoots of one year, and never any more.

By this method we shall gradually denude the stem of its lateral branches from below upwards, while it is increasing in vertical growth. The extent of clear trunk will thus gradually become larger in proportion to the uncleared portion or top. Thus, suppose we begin to prune when the tree has made fifteen years' shoots, then when it has made thirty years' shoots, we shall have cleared off fifteen; that is, half the height of the tree.

Now, when we have cleared half the height of the tree, or a very little more, we should pause in our further operations, and mark its state of growth. If it continue to grow vigorously, we may resume our operation of close pruning, but at longer intervals than before, so as never in any case to have cleared away more than one half, or at the utmost three-fifths, of the height of the tree, and never taking off more than one years' lateral growth of branches in a season.

Every tree, it is observed, must possess a sufficient top; that is, it must extend horizontally as well as vertically, so as to bear branches and leaves. The leaves are organs of nutrition of the plant, essential to the healthy exercise of the vegetable functions, and we must be careful to deprive it of no more of these organs than consists with our purpose of pruning. Now, by proceeding slowly in this gradual manner, never taking off more in any one year, than the growth of one year's lateral branches, we shall not usually interfere with the healthy growth of the tree, but shall always leave it a sufficient power of expansion at top, as to afford it the means of nutrition and growth. Further, by never cutting off more at a time than the growth of one year, the tree will generally have vigour to cicatrize the wounds that have been made upon its trunk; whereas, were we to lop off many branches at a time, according to the practice too prevalent, the tree might not have vigour to cover them with fresh growth of bark, and thus the wounds might remain, to the lasting injury and frequent destruction of the tree.

In pruning in this manner the branches are to be cut off quite close to the stem, so that the bark may quickly cover the wound; and although trees may be pruned in summer, the fittest period for pruning, as of all operations upon the living plant, when vegetation is inert: that is, from the fall of the leaf, to the period of the ascent of the sap in spring.

Thus, then, the operation of pruning may be said to be begun in the nursery, but at that time with an extreme degree of temperance, all the object of pruning at that early period being to prevent the plant becoming forked. When the trees are transplanted to their ultimate situation, we may examine them in the third, or at latest, the fourth year afterwards, and then, if more than one leading shoot is formed on any tree, we are to select the best, and shorten the others to about half the length of that which had been selected. And in like manner, when any branch or set of branches is seen to be extending laterally, with a growth disproportioned to that of the others, then, by merely shortening them, the tendency to the lateral extension will be sufficiently checked to allow the other branches to extend in an equal degree. And should we find that all the branches of a tree are tending to extend too much laterally, by merely shortening them in a slight degree, we shall give the ascendancy to one leading shoot, and so promote the upward tendency; and this is all the pruning required until the tree has attained, as has been said, the height of fifteen or sixteen feet, when the process of pruning the lower branches is to be begun and carried on by the slow process described. But even after we have begun the process of close pruning, we may still observe that the tree is ascending vertically, and, if required, give this tendency from time to time by shortening of any of the lateral branches.

It is not essential to the success of this method of pruning, that it be carried on every year. It will be sufficient to approach as near to the perfect practice as circumstances will allow, observing merely the general rule that not more than the growth of one year shall be taken off at a time, and that the process shall not be carried further than to the clearing off three-fifths of the height of the tree.

The method of pruning by the shortening of the lateral branches, was brought into notice in England by the writings of Mr. Billington, who had charge of a portion of the royal forests: and it was further developed and explained, with the addition of the gradual denudation of the lower branches, by Mr. Cree, in Scotland. To these most deserving individuals is due the merit of having introduced, and to the latter that of having perfected, a system of pruning very greatly superior to that which had been before in use.

Pruning as it is commonly practised can scarcely be said to be

found on any principle. Branches are loped off without limit or caution, and thus the growth of the tree is injured, and wounds formed upon its surface, which are never afterwards cicatrized. Often in the case of the young trees, we see the entire branches of successive years' growth loped off in a season, and nothing left but a bush at the top. By this system of mutilation, millions of trees are sacrificed. A great proportion indeed of the whole cultivated wood of the country is annually destroyed, and it were better that the pruning knife were never used at all than thus misapplied. The practice so common has probably been derived from that of the garden; but it is to be observed, that, in the garden, the object of pruning is to repress the growth of the wood and produce that of fruit; and the principle therefore, is in no degree applicable to the pruning required in the forest.

The principal instruments to be employed in pruning are a sharp knife, chisels with handles for reaching the higher branches, and sometimes a small saw for the larger branches. The hatchet is on no occasion to be used in pruning. The Indian saw ought to be used, which is made to act by being pulled towards the operator, in place of being pushed away from him like the common saw of Europe. By being fixed to a long handle, this instrument is adapted to the cutting off the higher branches.

When the proper direction has been given to the growth of the tree, and the lower branches have been pruned to the height to which it has been thought expedient to carry the operation, art has done all that it can do to render the tree useful. The natural growth of the tree must effect the rest. The trunk will increase in diameter by the addition of concentric layers of wood, yearly formed between the bark and the stem. The longer a tree stands while in a growing state, the thicker will its trunk become, and the more valuable. It makes wood rapidly to use a familiar expression, when the trunk has become of a good size: and it is an error, therefore, to fell wood which is intended for timber too soon.

In the pruning of forest trees, one of the most frequent errors committed is to delay the process till too late. By this delay the form of the tree is rendered such that it cannot be restored; and the loping off of large branches in the manner often practised, in order to give the tree a better shape, is for the most part attended with the evil of disfiguring it more, and enfeebling its growth. We constantly see those mistaken attempts to repair

past neglect, by the lopping off of large limbs, the places of which the tree now wants vigour to heal. Vast number of trees are destroyed by this system of mutilation, when all further object in pruning is at an end. Sometimes a large branch may be lopped off a tree top heavy, or when a branch is likely to be split, or for some other good reason. But it is an error which must end in disappointment, to begin this system of lopping a full grown tree, with the design of compelling it to resume its process of increase when it has naturally ceased.

When a tree has naturally been neglected, but is not yet so far advanced, but that we may hope to restore it, we have merely to apply the principle of pruning explained to the case of the particular tree. We have to shorten the lateral branches which are forming forks, so as gradually to produce the upright tendency of the leading stem required. The rule is to proceed with the greatest temperance, taking care never to do too much in one season, lest, by depriving the tree of its branches, we enfeeble its vigour and impede its growth.

ARTICLE V.

ON THE CLIMATE OF HOT HOUSES.

BY PROFESSOR DANIELL, KING'S COLLEGE, LONDON.

THE principal considerations which generally guide the management of gardeners in this delicate department, are those of temperature; but there are others, regarding moisture, which are, I conceive, of at least equal importance. The inhabitants of the hot-house are all natives of the torrid zone, and the climate of that region is not only distinguished by an unvarying high degree of heat, but also by a very vaporous atmosphere. Captain Sabine, in his *Meteorological Researches between the tropics*, rarely found, at the hottest period of the day, so great a difference as ten degrees between the temperature of the air and the dew-point; making the degree of saturation about 730, but most frequently 50. or 850; and the mean saturation of the air could not have been below 910. Now, I believe, that if the hygrometer were consulted, it would be no uncommon thing to find in hot-houses, as at present managed, a difference of 20° between the point of condensation and the air, or a degree of moisture falling

short off 500. The danger of over-watering most of the plants especially at particular periods of their growth, is in general very justly appreciated ; and, in consequence, the earth at their roots is kept in a state comparatively dry, the only supply of moisture being commonly derived from the pots ; the exhalations of the leaves is not enough to saturate the air, and the consequence is a prodigious power of evaporation. This is injurious to the plants in two ways ; in the first place, if the pots be at all moist, and not protected by tan or other litter, it produces a considerable degree of cold upon their surface, and communicates a chill to the tender fibres with which they are lined. The danger of such a chill is carefully guarded against in the case of watering, for it is one of the commonest precautions not to use any water of a temperature at all inferior to that of the air of the house ; inattention to this point is quickly followed by disastrous consequences. The danger is quite as great from a moist flower-pot placed in a very dry atmosphere.

The custom of lowering the temperature of fluids in hot climates, by placing them in coolers of wet porous earthenware, is well known ; and the common garden pot is as good a cooler for this purpose as can be made. Under the common circumstances of the atmosphere of a hot-house, a depression of temperature amounting to 15 or 20 degrees, may easily be produced upon such an evaporating surface. But the greatest mischief will arise from the increased exhalations of the plants so circumstanced, and the consequent exhaustion of the powers of vegetation. The flowers of the torrid zone are, many of them, of a very succulent nature, largely supplied with cuticular pores, and their tender buds are unprovided with those integuments and other wonderful provisions by which nature guards her first embryo productions in more uncertain climates. Comparatively speaking, they shoot naked into the world, and are suited only to that enchanting mildness of the atmosphere for which the whole system of their organization is adapted. In the tropical climates the sap never ceases to flow, and sudden checks or accelerations of its progress are as injurious to its healthy functions, as they are necessary in the plants of more variable climates to the formation of those hybernacula which are provided for the preservation of the shoots in the winter season.

(To be continued.)

REVIEW.

The Suburban Gardener and Villa Companion;—By J. C. LONDON, F. L. S., H. S., &c.; London: Longman, & Co.

IN MONTHLY NUMBERS. The fifth number, for October 1837, 48 pages, has been sent us, on looking it over, we find it contains many useful observations, and as the present number is doubtless a fair specimen of the entire work, we have no hesitation in recommending it to our readers. The following is an extract from the number now before us.

On Planting Flower beds with fibrous-rooted Perennials and Bulbs alternately.

“THE advantage of introducing bulbs in flower-gardens is, that their flowers make a greater show than those of fibrous rooted plants generally do in spring; and as, in small suburban residences, it seems more desirable that the gardens should look well in spring than in summer (because at the latter season many families go out of town for a few months), the use of bulbs appears very desirable. The manner of introducing them may either be in beds by themselves, to be succeeded by fibrous-rooted plants when they go out of flower; or intermixed with fibrous-rooted perennials, by using only half the number of the latter, and those of larger growth; and by placing the bulbs and the perennials alternately. As the bulbs come all into flower in March, April or May, they will have faded before the perennials have come to their full growth; and hence, notwithstanding the increased size of the perennials, the bed will not appear crowded. In the selection of both perennials and bulbs, we shall give, as far as practicable, only one species of a genus, in order to produce as much botanical variety as possible within the given space.

The perennials for the bed *a* may be the 6 following kinds; none of which come into flower earlier than June and which are all about 1 ft., or from that to 1 ft. 6 in., in height:—

Betonica grandiflora, large flowered betony; red, June.
Campanula ariæfolia, the beam-tree-leaved bell flower; white, June.
Oenothera undulata, the waved-leaf evening primrose, yellow, July.
Delphinium elegans, perennial larkspur, blue, July.
Dianthus carthusianorum, Carthusian pink, red, August.
Scutellaria peregrina, white helmet-flowered, August.
Gentiana Saponaria, the soapwort-leaved Gentiana, blue, September and October.
Aster diffusus, white Michaelmas daisy September and October.

VOL. V.

The bulbs may be the 8 following:—

Scilla bifolia, blue two-leaved squill, March.
Crocus albiflorus, white-flowered crocus, March.
Anemone pavonia, the peacock's eye anemone, red, April.
Hyacinthus orientalis, white hyacinth, April.
Narcissus minor, small narcissus, yellow, April.
Fritillaria tenella, slender fritillary, purple, May.
Erythronium Dens canis, the dog tooth violet, reddish lilac, May.
Muscaria pallens, pale-blue musk hyacinth, May.

The bed *b* may be planted with the 3 following perennials:—

Ononis rotundifolia, the round-leaved restharrow, red, June.

FF

Silene chloræfolia the Armerian catch-fly, white, July.

Commelina erecta, the upright commelina, blue, August.

The bulbs may be :—

Tulipa suaveolens, the sweet-scented wild tulip, variegated, March.

Galanthus nivalis, the common snow-drop, white, March.

Allium amœnum, the red flowered allium, April.

Narcissus tenuifolius, the slender-leaved narcissus, yellow, May.

The perennials for the bed c may be :—

Valeriana dioica, the dioecious valeriana, red, June.

Gypsophila arenaria, the sand gypsophila, white, July.

Tagetes lucida, French marigold, yellow, shining, perennial, August.

The bulbs may be :—

Corydalis albiflora, the white-flowered fumitory, March.

Iris tuberosa, the tuberous rooted iris, variegated, March.

Gagea bracteolaris, the yellow star of Bethlehem, April.

Lilium concolor, the self-coloured lily, red, May.

The perennials for the bed d may be :

Papaver orientale, the scarlet poppy, June.

Campanula persicifolia, the peach-leaved bell-flower, white, July.

Veronica candida, the white-leaved speedwell, blue, August.

The bulbs may be :—

Leucojum vernum, the snow-flake, white, March.

Eranthis hyemalis, the winter aconite, yellow, March.

Oxalis floribunda, the abundant flowering wood sorrel, red, April.

Scilla peruviana, the Peruvian squill, Purple, May.

The perennials for the bed e are :—

Lychnis sibirica, Siberian lychnis, white, June.

Potentilla Russelliana, Russell's potentilla, scarlet, July.

Baptisia tinctoria, the dyer's baptisia, yellow, August.

The bulbs are :—

Allium Chamæmoly, the dwarf moly, white, March.

Muscaria botryoides, the grape hyacinth, blue, April.

Tulipa præcox, early tulip, red, April.

Narcissus Bulbocodium, the hoop-petticoat narcissus, yellow, May.

The perennials for the bed f may be the 6 following :—

Clinopodium vulgare, common wild basil, red, June.

Lychnis neglecta, white lychnis, June.

Hypericum pulchrum, yellow St. John's wort, July.

Campanula carpatica, the Carpathina bell-flower, blue, July.

Phlox suaveolens, the sweet scented phlox, white, August.

Malva moschata, musk-scented malva, red, August.

The bulbs may be the 5 following :—

Scilla italica, Italian squill, blue, March.

Fritillaria lutea, yellow fritillary, March.

Ornithogalum umbellatum, the umbel-flowered star of Bethlehem, white April.

Narcissus Jonquilla, common jonquil, Lilium aurantium, the orange lily, May.

The perennials for the bed g may be the 5 following :—

Anthyllis coccinea, the scarlet kidney vetch, June.

Dianthus cæsius, the grey pink, white June.

Geranium ibericum, Spanish crane's bill, blue, July.

Oenothera serotina, late evening primrose, yellow, August.

Pentstemon diffusus, spreading pentstemon, purple, September and October.

The bulbs may be :—

Fritillaria præcox, early fritillary, white, March.

Allium incarnatum, flesh coloured moly, red, April.

Tulipa sylvestris, wood tulip, yellow, April

Scilla campanulata, bell flowered squill, purple, May.
Narcissus poeticus, the poet's narcissus, white, May.

The perennials for the bed & may be:—

Dianthus deltoides, the deltoid pink, red, June.
Yerben sulphurea, the yellow verbena, July.
Erigeron bellidifolius, the daisy-leaved erigeron, purple, July.
Aster conyzoides, the fleabane-like aster, white, August.

Scabiosa australis, the southern scabious, blue, September and October.

The bulbs may be as follows:—

Bulbocodium vernal, spring bulbocodium, purple, March.
Leucojum æstivum, summer snowflake, white, April.
Gladiolus communis, common corn-flag, red, May.
Fritillaria imperialis, crown imperial yellow, May.

By this mode of planting we have 36 species of perennials, and 88 bulbs; and the advantage that it has over the preceding mode is, that a much greater show will be made in the months of March, April, and May; because, as already mentioned, the flowers of bulbous-rooted plants are much larger in proportion to the foliage than those of fibrous-rooted plants. The flowers are also much more conspicuous; because, in general, they expand before the leaves have attained their full size. On the whole, however, the culture of bulbs in mixture with perennials is inconvenient; except when florist's bulbs only are employed, that come into flower and fade all about the same time, and the roots of which may be taken up annually in June or July, and replanted in November or December. This admits of taking up the perennials every year, or every other year, stirring, refreshing or renewing the soil, and pruning or otherwise reducing the plants, and then replanting them. On the other hand, if what may be called botanical bulbs were introduced, as these are best allowed to remain in the soil for several years, the perennials cannot be so conveniently taken up, reduced, replanted, when they get too large. Another reason against intermixing permanent bulbs with perennials is, that, the moisture required during summer to keep the fibrous rooted plants in vigorous growth, has a tendency to rot the bulbs, they being at that time in a dormant state, and, in their native habitats, comparatively dry; almost all bulbs being natives of countries which have alternate seasons of drought and moisture, and flowering only in the latter. The best florist's bulbs to intermix with perennials are the different varieties of the common hyacinth, the crocus, the tulip, and the narcissus.

On Planting flower beds with showy Perennials, which are common and cheap.

The following list consists of showy species and varieties, quite hardy, that will grow with ordinary care, in any common soil, and may be procured in any good nursery, at prices varying from 3d. to 1s. each, when purchased by the single plant; or from 2s. 6d. to 10s. per dozen, as will be seen by the priced lists at the end of this work. Those who wish to know something more of any particular kind than what has been here stated, may refer to our descriptive catalogue, in which they will also find short directions for their culture; and to the priced lists for their prices.

February and March.

Viola tricolor, different varieties of heartsease.
Viola odorata, the sweet-scented violet.
Bellis perennis, the double red, dou-

ble white, variegated, and hen and chickens, daises.
Gentiana acaulis, the dwarf gentian, purple.
Hepatica triloba, the double red, double white, and double blue, hepaticas.

(To be Continued)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

- 1.
- CEREUS AKERMANNII*
- .
- Akermann's Mexican Cereus*
- . [
- Bot. Mag.*
- 3598.

CACTEÆ. ICOSANDRIA MONOGYNIA.

This splendid flowering plant has generally been considered an hybrid between *C. speciosa* and *speciosissimus*, but seeds of the original plant were first sent to this country from Mexico. The flowers are as large as *speciosissimus*, of a fine reddish-scarlet colour, but destitute of the fine azure colour which tinges the flower of that species.

- 3.
- COWANIA PLICATA*
- ,
- Plaited-leaved*
- . [
- Brit. Flower Gard.*
- 4001.

ROSACIA ICOSANDRIA POLYGYNIA.

An hardy evergreen, much branched shrub, a native of the uplands of Mexico. The blossoms are about an inch and a half across, of a rich rosy lilac colour. The flower in form very much resembles a single rose, of the size stated. They are produced numerously, and make a showy appearance. The plant is a valuable acquisition to our dwarf shrub; the plant was raised from seeds by Mr. Thomas Blair, Gardener to Mr. Clay, Stamford Hill. *Cowania*, in commemoration of the late Mr. James Cowan, who introduced into this Country a number of interesting plants from Mexico and Peru.

- 3.
- CYPRIPEDIUM PURPURATUM*
- .
- Purple stained Lady's slipper*
- , [
- Bot. Peg.*
- 1991.

ORCHIDACEÆ, GYNANDRIA DIANDRIA.

This new species has been recently introduced into this country by Mr. Knight, of King's Road, Chelsea, from the Malayan Archipelago. It has bloomed in the collection of Messrs. Loddiges's of Hackney Nursery. Its purple flower has a very pretty appearance. The foliage is very much like that of *C. venustum*.

- 4.
- GESNERIA LATERITIA*
- ,
- Brick-coloured flowered*
- . [
- Botanist*
- .

GESNERIACEÆ. DIDYNAMIA, ANGIOSPERMIA.

This species is a native of Brazil, received from that country to the London Horticultural Society's Garden, in 1832, and has bloomed in the plant stove at that place. The flower stem rises about two feet high, producing a number of brick-red flowers, each about an inch a half long. This species has, till very recently, been considered to be *Gesnera Sellowii*, but it is now ascertained not to belong to the section of *Gesnera*, to which *G. Sellowii* belongs, but to that of *G. bulbosa*. *Gesneria*, so named in compliment to Conrad Gesner of Zurich, who died in 1565.

- 5.
- GESNERIA LINDLEYI*
- ,
- Dr. Lindley's Gesneria*
- . [
- Bot. Mag.*
- 3602

SYNONYM, *G. RUTILA*, VAR *ATROSANGUINEA*.

This handsome flowering species is a native of Brazil. It differs from *G. rutila* in many particulars. That species has oxillary, solitary, flowers, and has a wider mouth. The hypogynous glands are only two, whereas in *G. Lindleyi* they are constantly five. The flowers of this latter species are of a bright scarlet colour, each about an inch and a quarter long; they are produced numerous on a raceme of near two feet long. The flower stem rises from three to four feet high.

6. GRABOWSKIA BOEHAAVIÆFOLIA, *Boerhaavia-laved.* [Bot. Reg. 1985]

SOLANACEÆ. PENTANDRIA MONOGYNIA. SYNONYMS. LYCIUM, BOERHAAVI-FOLIA. LYCIUM HETEROPHYLLUM. EHRETIA HALIMIFOLIA.

A spinous shrubby plant, introduced to the London Horticultural Society's Garden, from Brazil, where it is a common shrub in the woods and fields, and grows to the height of eight or ten feet. It has been found hardy enough to bear the open air of this country, when trained against a south aspected wall. It is a very branching shrub, with leaves much resembling those of *Psidium Cattleianum*. Each flower is about half an inch across, of a pale-violet blue. They are produced in small branching panicles. *Grabowskia* in compliment to Mr. N. Grabowsky, an Apothecary at Ohlaf, an author of a work on flowers,

7. LOBELIA CAVANILLESII. *Cavanilles's Lobelia.* [Bot. Mag. 3600.]

CAMPANULACEÆ. PENTANDRIA MONOGYNIA. SYNONYM, LOBELIA PERSICIFOLIA.

A native of New Spain, and requires to be grown in the stove in this country. It blooms in August and September. It is an herbaceous plant, having a flower stem about a yard high, with scarcely any branches. The flowers are produced numerously, upon long foot-stalks. Each flower is about an inch and a half long of an orange-red colour. The stamens are united their whole length, and forms a long red tube, which adds to the beauty of the flower. The plant has bloomed in the Glasgow Botanic Garden. *Lobelia* in compliment to Mr. Lobel.

8. LOBELIA SIPHILITICA, var MILLERII, *Miller's Blue American Lobelia.*

[Bot. Mag. 3604.]

LOBELIACEÆ, PENTANDRIA MONOGYNIA.

This beautiful flowering hybrid has been raised from seed, between *L. siphilitica*; and *L. fulgens*; or *L. splendens*, or some fine scarlet flower. The colour of the flower is the blue of the former, with the fine scarlet or crimson of one of the others. It is quite hardy, and produces numerous flower stems rising to the height of two feet, which continue in bloom from July to the end of summer. The plant deserves a place in every flower garden. We have twelve other fine varieties.

9. MAXILLARIA STEELI, *Mr. Steel's.* [Bot. Reg. 1986.]

ORCHIDACEÆ. GYNANDRIA MONANDRIA. SYNONYM. MAXILLARIA FLAGELLIFERA.

It is a native of Demerara, from whence it was introduced in 1835. The plant is of very singular growth; the stems are pendulous, and the leaves are very long, extending three or four feet. They are like so many very strong rushes. The flowers are produced solitary, each rather more than two inches and a half across. They are yellow, irregularly spotted and striped with large spots, and stripes of dark purple. The labellum is of a sulphur colour with dark purple veins, altogether singularly handsome. The plant has bloomed in the collection of Messrs Loddiges's of Hackney.

In the Botanical Register, Dr. Lindley has noticed the following new species of *Maxillaria*, viz. 1, *Maxillaria Rollissoni*, in Messrs Rollisson's collection, at Tooting Nursery. The flowers are of a pale Lemon colour, with the Labellum dotted in the middle with fine purple.

2. *M. acicularis*; a native of Brazil, in the collection of the Honourable and Reverend W. Herbert. The flowers are of a purplish chocolate colour.

3. *M. uncatæ*; a native of Demerara, in Messrs. Loddiges's collection.

4. *M. chlorantha*; a native of Demerara; in Messrs. Loddiges's collection. The flowers are of a yellowish green, small they are sweet scented.

5. *M. variabilis*; a native of Mexico. The flowers are small of a deep purple colour. This species has been known by the following names *M. atropurpurea*, *M. concinna*.

6. *M. tenuifolia*; a native of Mexico. The flowers are of a rich purple, spotted, and broken into small yellow patches.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES

ON *STENACTIS SPECIOSA*.—I have raised from seed a number of plants of the *Stenactis Speciosa*. I can find no such name in Sweet's catalogue, or any other book of reference in my profession, will you have the kindness to inform me in your November number, whether they are worth keeping, and if they are hardy, or will live through the winter in the open ground. I cannot recollect from whence I had the seeds unless it was Chiswick Gardens.

Sep. 6th, 1837.

S. W.

[The plant is quite hardy, herbaceous perennial. When raised from seed the first season it usually produces a large proportion of foliage, but in successive seasons, less foliage and more bloom, and the large bluish purple aster like flowers are very showy.—CONDUCTOR.]

ON PRESERVING GERANIUMS THROUGH WINTER.—Can you advise me of any plan to save through the winter, geraniums turned out of pots into borders early in September, and are grown so large as to become doubtful if they can again be got into pots with a hope of preserving their lives?—can you or any of your readers inform me if the plan of the Rev. Mr. Williamson, by cutting off the leaves, and fibres, and preserving them in sand in a cellar or dry place has been found to answer? any information you can afford me (early) on this subject, will greatly oblige your sincere well wisher.

PEDRO.

If the plants be taken up with as many of the fibrous roots as can be got, and they are placed in pots, boxes, or baskets, with good soil, well watered at the time of planting, and then put where they can be protected during winter, in a greenhouse, frame, or room, they will survive well. Care must be taken after the first watering, not to repeat it frequently at the roots, till the shoots begin to push, or the tender fibres would most likely perish. If the heads be too large, they may be cut in at the time of replanting in the boxes, &c., only allow a shoot, or shoots to remain upon the plants which has foliage, this materially contributes to their rooting. A sprinkling of water occasionally over the foliage after planting in the boxes, &c., will be beneficial. We have kept a hundred plants in a small box, in this way, and not one died. Early in April we usually took off a lot of new shoots and struck them for turning out in May, the larger old plants, for the middle of a bed, and the younger (new struck ones) for the sides. These made uniformity of appearance in the bed, being highest at the centre, and gradually declining to the side. We have not tried the plan of the Reverend Mr. Williamson.—CONDUCTOR.

ANSWERS.

ON *DELPHINUM CHINENSIS ALBA*.—John Young begs to say to the Enquirer for *Delphinium chinensis alba*, that he will be happy to supply it at list prices sent to the Editor, (1s. 6d. each) and if the order amounts to twenty shillings, he will pay carriage to London Nursery, Taunton, Somersetshire.

REMARKS.

NEW PLANTS, &c.—*Lilium atrosanguineum*. This fine flowering species has been most abundantly and splendidly in bloom, in the Nursery-grounds of Mr. Groom, Walworth, London. The flower scape rises about a foot high. The plant is perfectly hardy, and on this, as well as its splendour, deserves a place in every flower garden.

Duranta Flesii. This has recently been introduced, and the character sent with it, was, "it is a most superb flowering plant." We saw fine plants of it growing in the open ground in the beautiful Nursery of Mr. Young of Epsom. If the present new species has the habit of its flowers, and bear a resemblance to the *Duranta Plumierii*, it certainly deserves a place in every collection. It is most likely to require the protection of a greenhouse during winter, and probably to bloom it well in its proper season.

Gesneria Sellowii. This very fine species we saw in the exhibition at the Egyptian Hall, London, and in some of the London nurseries. It is the finest flowering species we have seen. The flowering stems rises about four feet high, producing an immense number of flowers, each about three inches long, of a most brilliant scarlet colour. It deserves a place in every stove.

Fuchsia Fulgens. This new and most striking species has been introduced from Mexico, by Mr. Lee of Hammersmith Nursery. The leaves are about five inches long and four broad of a bright green, tinged near the middle, and at the underside with purple. The flowers are very different in appearance from any other species, approaching the nearest to *Fexcorticata* in form, but are much larger. Each flower is about three inches and a half long. The calyx (outer portion of the flower) is a light scarlet-red, having the curved segments green. The corolla (inner portion of the flower) of a deep scarlet-red. The flowers are produced at the extremities of the shoots, hanging most gracefully pendant, in clusters of from ten to thirty, or even more. The plant deserves a place in every greenhouse, and, as we suppose, it will do as well in the open border as any other kind, it deserves a place in every border or flower garden. It is a most desirable plant, having noble foliage, and most beautiful bloom.

Correa Milnerii. The flowers are larger than *C. speciosa*, of a fine rose colour. The plant well merits a place in every greenhouse. We saw fine plants of it at Mr. Grooms, Walworth.

Chorizema. A new species introduced to Mr. Lowes of the Clapton Nursery. The species appears most extraordinary. The leaves are as large as *Hovea Cellsii*, and we are informed the flowers are of a size proportioned to the foliage, and produced in very long spikes. This, in addition to its fine foliage, renders it a most valuable acquisition, and worthy a place in every greenhouse. It will certainly very far exceed any other of its species yet introduced into this country. It was sent from the Swan River.

Naeturtium tuberosum. This very fine species we have seen in most profuse bloom, at Mr. Young's Nursery. The flowers are, calyx, of a fine deep orange red: corolla of a light fine yellow, striped in the inside with dark crimson. Each flower is an inch and a half long, and an inch across the mouth of its corolla. It is a very valuable acquisition, growing and blooming profusely in the open ground in summer. The large roots, six inches across, are said to be very agreeable when eaten.

Verbena Drummondii lilacina. We have seen plants of this fine large lilac variety, that had been pegged down for a bed, one mass of bloom, and growing in contrast with a bed of each of the following, viz. *Tweediana*. *V. melindris*, and *Valbiflora*. The effect was very striking. The *V. Tweediana* was pegged down as the *Drummondii*. and both kinds had taken root, similar to the *V. melindris*.

Nuttallia grandiflora. This is the finest of this showy genus. The flowers are of a deep rosy purple, very large, and renders it very valuable for the flower garden. It continues to bloom till the end of the season.

REFERENCE TO PLATE.

LOBELIA AZUREA. A newly introduced species by Mr. Groom of Walworth. It is a hardy annual of great beauty, well deserving a place in every flower border, or as an ornament in summer, in the greenhouse. It grows about two feet high, branching profusely.

CUPEA SILENOIDES. A very pretty flowering hardy annual, in the collection of Mr. Groom. It grows about a foot high, and is very neat and beautiful.

PENTSTEMON GENTIANOIDES. This very fine species grows four or five feet high, producing a very extended spike of numerous flowers, rendering it one of the most splendid plants that can be introduced into the flower garden, (it ought to be in every one.) We saw fine specimens at Mr. Groom's, and at Mr. Young's. We repeat, no flower garden should be without it.

NUTTALLIA GRANDIFLORA. A hardy, border plant which we saw in most profuse bloom at Mr. Grooms, in pots. The flower stems rise from two to four feet high. It is a most desirable plant, its blossoms being produced profusely, and are very neat and showy. No flower garden should be without it. It is very ornamental too in the greenhouse, as a summer and autumn ornament.

FLORICULTURAL CALENDAR FOR NOVEMBER.

GREENHOUSE PLANTS.—If any are not yet housed, they should now be without delay. All possible air should be admitted to the greenhouse, excepting when frosty. The plants should not be watered in the "broad cast" manner, as it is termed; but should be attended to singly, so that no plant may be watered but what is actually dry. Water should not be given in the evening, but in the early part of the day, so that damps may be dried up before the house is closed. If watered in the evening, the damp arising during the night will cause the leaves to decay, and encourage moss, lichens, &c. upon the soil. This will invariably be the consequence, unless fire heat be applied to counteract the effect. The soil in the pots should frequently be loosened at the surface, to prevent its forming a mossy or very compact state.

FLOWER GARDEN.—All decayed stalks should be cleared away. Seeds of all kinds of flowering plants should be collected, if neglected hitherto. The borders should be dug over, and additional fresh soil be added where required. All kinds of perennial border flowers should be planted. If any plant has become too large, it should now be reduced in size, and vacancies filled up. Bulbous roots, *Ranunculuses*, *Anemones*, &c., should be planted without delay. For *Auriculas*, *Carnations*, &c., see last month's Calendar, where suitable directions are given. Evergreen and deciduous shrubs may be planted this month. Protect beds of bulbous flowering plants in unfavourable weather. Newly planted shrubs, in exposed situations, should be secured to stakes. All kinds of border flowers kept in pots for winter protection, &c., should be removed to winter quarters, either in pots, frames, or some warm dry situation. Composts for floricultural purposes should be turned, &c. *Calceolarias* that have been in borders should be taken up, and kept in pots, in a cool, dry situation, either in the greenhouse, frame, or pit. Let the plants of *Chrysanthemums* in-doors have abundance of air. In taking up dahlia roots, be careful not to twist or injure the tubers near to the crown: this attention is particularly necessary with small roots; never cut down the stems till the roots are to be taken up, for the stem being hollow holds rain, and half the lost Dahlias may be traced to this. Care should be taken to have the names or numbers well secured to the root by means of copper-wire fastenings: it often happens that the stalk perishes before spring, and names attached thereto are liable to be removed, and to cause confusion. Tubers of *Commellina*, and bulbs of *Tigridias*, should be taken up and preserved dry through winter.



Fuchsia fulgens.



Tecoma jasminoides.

THE
FLORICULTURAL CABINET,

DECEMBER 1st, 1837.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE BEST SEASON FOR PLANTING EVERGREEN SHRUBS, &c.

BY A CONSTANT READER.

THERE is an article in the last Number of the Cabinet, by a London Nurseryman upon planting Evergreens, which, after having read attentively, I am inclined to believe may be the cause of misleading some of your readers.

I am neither a nurseryman or gardener, but having, during my leisure hours, had some experience in horticulture, it may not be presumption in me, to give my reasons for dissenting from the observations contained in your Correspondent's communication. He recommends removing Evergreens in April or May, giving as a reason that the young wood cannot be ripened sufficiently in autumn without suffering (I suppose from frost) Now here we are at issue, I admit that a few of the extremities of our shrubs, many perish, but that evil I have always prevented by heading down, say from twelve to eighteen inches, according to the size of the shrub. Nothing would induce me to plant in May unless my ground was of a wet clayey consistence, if so, no matter when. Evergreens grow nearly all the year; plant them in September or October, take one up at Christmas, and you will find an immense number of new fibres pushed from the old roots;

VOL. V.

G G

establish a good bottom and then there is no fear of a good bushy head. On the other hand, plant in April or May, suppose in a light sandy soil, the spring and summer may be extremely dry as they have been for three years past, what becomes of your Evergreens? Why, the whole head is withered before the autumn, with the exception, perhaps, of a pale weakly shoot, proceeding from the extremity of the root, which, with great difficulty is able to endure the trials of the following winter. I have now many hundreds of shrubs growing luxuriantly which have been planted during the last and previous autumns, which I am quite sure would have gone to the tomb of the Capulets, had they been planted according to the recommendation of a London Nurseryman. I have been induced to offer these observations, because I am quite confident that the best and surest way to elicit truth, is to excite discussion upon any given subject.

A CONSTANT READER.

ARTICLE II.

ON THE CULTURE OF IXIAS.

BY FORTUNATUS.

MESSRS. LOCKHART, Seedsmen, London, having most successfully cultivated *Ixias* in the open air in this country. I solicited a few remarks as to the plan pursued, and the following particulars are what Messrs. Lockhart favoured me with. Believing the remarks would be serviceable to the readers of the Cabinet, I forward them for insertion therein:—they say,

Take a frame, such as is used for cucumbers, and fill it within three inches of the glass with a compost consisting of one-third of river sand, one-third of leaf-mould, and one-third of decomposed cow manure.

The bulbs are planted by the middle of October, or beginning of November, two or three inches deep. During the winter, care must be taken to keep out the frost, giving them, however, as much air as possible on fine days.

About the beginning of March, the glass ought to be taken off entirely during the day when the weather is fine, but it must be replaced again at night.

In April, the glass may be taken off for good, both by day and

night, and a fine bloom may thus be obtained by the end of May.

If required to bloom in pots, sink them on a level with the surface of the mould in the frame, and treat them as above. *Ixias* should be watered slightly if the mould becomes dry.

Brixton Hill, Sept. 26th.

ARTICLE III.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIA.

HAVING derived both amusement and instruction from your useful and interesting publication, the Floricultural Cabinet, and feeling desirous of promoting the object, for which it is intended, I herewith send you a descriptive list of fifty-two varieties of the *Camellia japonica*.

- Donkelaarii*, semi-double, dark red with white spot or stripe.
- Mutabilis*, double rich crimson, red, very good.
- Chandelerii*, double dark red, with white stripe.
- Picturata*, very large double white with pink or blush stripe.
- Rosea pleno*, very double rose, beautiful form.
- Lefeveriana*, double fine red, beautiful shape.
- Variegata*, double light red, white stripe.
- Eclipse Pressis*, double white, with pink spot or stripe.
- Alba pleno*, double pure white, beautiful shape
- Nobilissima*, double white, very beautiful.
- Althæeflora*, double dark red, with white spot, fine.
- Insignis*, single large red, with white spot, fine.
- Colvillea*, Double white blush spot or stripe, fine.
- Kubro pleno*, double rich red, large flower.
- Coralina*. semi double dark crimson red, white spot, very fine.
- Striata*, simplex, single white, blush spot or stripe.
- Hendersonii*, double light rose, beautiful form,
- Lepida*, double light rose good.
- Venusta*, Cunningham's double dark red, large and fine.
- Tricolor*, Double white with blush and red spots or stripes.
- Speciosa*, very double dark red.
- Myrtifolia*, double light red, beautiful form.
- Florida*, double light red, large flower, good.

- Spatulata*, single blood red, white spot or stripe.
Pressii, single red large flower.
Miltonia, double red with white stripe.
Timbreata, double white fringed, beautiful.
Woodsii, double dark rose, good.
Actonia, single light red, large flower.
Punctata, very double white, blush spot or stripe, large flower.
Simboldii, single rose, large and fine.
Bedfordii, double dark red, very good.
Welbankii, double pale white, large flower.
Dorsettii double dark red, white spot or stripe, fine.
Elphinstonii, very double dark red, fine.
Candidissima, double white, fine form, good.
Triumphanus, double rose, good.
Anemoneflora rubra, double dark red, good.
Rosa Mundii, double white with red spot or stripe.
Cliceana, double dark red, very good.
Lankmanii, single rose, large flower.
Conspicua, double light rose, good.
Campbellii, double white, with pink spot or stripe, fine.
Flaescens, double buff, beautiful shape.
Elegantissima, semi double, dark rose, good.
Carswelleana, double red, white stripe, fine form.
Hetropetta alba, double white very good.
Hetropetta rubra, double dark red, very fine.
Juliana, double white with pink stripe, very beautiful.
Herbertia, single red, large flower.
Semiduplex alba, senu, double white.
 (To be continued.)

ARTICLE IV.

CONVERSATION BETWEEN BLOOMWELL AND WOULDKNOW.

(Continued from page 222.)

WOULDKNOW. Do you think so.

BLOOMWELL. Yes, in the course of my experience, I have frequently had bizarres of this class lose the pink stripe, and become purple or crimson flakes, but never met with an instance either in my own garden, or elsewhere, of a bizarre which had softened down to a rose flake; Huggin's Brilliant, indeed is.

sometimes little more, but there is always enough of the dark colour to denote the class it belongs to.

WOULDKNOW. I should think, if it were really a sport, it would sometimes return to its original state, under so many different methods of culture.

BLOOMWELL. That might or might not happen, run flowers rarely return to their original state, though there are some instances in which they do, so Cartwright's Rainbow, C. B. is said frequently to return, and I have had Waterhouse's Summit of Perfection, return to the bizarred state, after being a flake three or four years, but I never heard of Fletcher's Duchess changing to a bizarre. The person who first sent it out, if living, could certainly set the question at rest, unless it was a sport or raised from seed.

WOULDKNOW. Is not this generally said to be the best rose flake grown?

BLOOMWELL. That is perhaps but matter of fancy, it has deservedly many admirers on account of its high colour, and when in a fine state is almost invincible, for my own part, I have seen no rose flake yet that I can prefer to Tyso's Victoria, when you can get it clean (which by the bye is not so often as might be wished) the beautiful flaking of this flower, its fine form, good size, and free growth, render it a valuable acquisition to any collection, it is a pity the white should be so seldom free from speckles. But come Sir, the day is very warm, let us sit down in the arbor and chat awhile and moisten our throats with a glass of ale.

WOULDKNOW. With all my heart. (*they sit down*). You mentioned of raising a seedling like Wild's Perfection; Have you been the raiser of many good seedlings, Mr. Bloomwell?

BLOOMWELL. Why, yes, I have no reason to complain, I have succeeded in raising above a score of as good flowers as most.

WOULDKNOW. You must have been very fortunate then, as Mr. Hogg declares the man that raises six in his life-time, has had his endeavours crowned with success.

BLOOMWELL. I suppose Mr. Hogg means six such, as would set all competition at defiance, for there are many persons, and (Mr. Hogg no doubt, among the number) who have raised four or five times half a dozen flowers of as good properties as at least half those enumerated by Mr. Hogg in his book, but this may be partly owing to the improved state of the collection, now

kept for several years. On my first attempt to raise seedlings I got none worth keeping, but as my stock of flowers increased, both in quantity and quality, I found my seedlings began to be better, and I at length saved seed from first-rate flowers only, sometimes resorting to artificial means of impregnation, and sometimes trusting entirely to nature, the former is decidedly the surest means of procuring seed, but is by no means the surest way of raising fine flowers, the seed raised naturally producing, as often as the other superior flowers.

WOULDKNOW. The odds then against raising good seedlings are not quite so great as I thought them?

BLOOMWELL. Perseverance will do much; some people having had no success for a year or two give up the raising seedlings as a useless pursuit; but I would impress upon the mind of the young Florist, that if he wishes to succeed I have no doubt but there are many novelties yet to be raised, and new ones to be added to our present stock. In 1835 I raised a scarlet and pink bizarre, which is a variety I had not seen before; I have seen several Piccotees slightly bizzarred, as pink and crimson, lilac and deep purple. I had one seedling this season beautifully laced with pink and purple, but unfortunately it was single. A friend of mine has a heavy edged red Piccotee, curiously shaded with black: these variegations, I have no doubt, will be in time more fully developed, as many others which have never met my notice. There is such a pleasure in raising seedlings, so much to anticipate, so much to exult in, when you see one of your own productions at the head of its class, triumphing, perhaps, over some of the most renowned veterans of the day; that I would never be without a bed of seedlings if I could help it.

(To be continued.)

What in the name of Mr. Thomas Hogg, can an 'Old Florist,' (page 229) mean by advising us to fertilize some double flowers with the pollen of our best double ones which in many cases is not to be found; the reverse of the method is much more rational and likely to succeed. Semi-double generally having the male organs in abundance, these should be handsome coloured flowers, the hybrids generally partaking most of the colour of the male parent, and the form and habit of the female.

BIZARRE.

ARTICLE V.

ON THE CLIMATE OF HOTHOUSES.

(Continued from page 256.)

SOME idea may be formed of the prodigiously increased drain upon the functions of a plant, arising from an increase of dryness in the air, from the following consideration. If we suppose the amount of its perspiration, in a given time, to be 57 grains, the temperature of the air being 75°, and the dew-point 70, or the saturation of the air being 849, the amount would be increased to 120 grains in the same time, if the dew-point were to remain stationary, and the temperature were to rise to 80°; or, in other words, if the saturation of the air were to fall to 726.

Besides this power of transpiration, the leaves of vegetables exercise also an absorbent function, which must be no less disarranged by any deficiency of moisture. Some plants derive the greatest portion of their nutriment from the vaporous atmosphere, and all are more or less dependant upon the same source. The *Nepenthes Distillatoria* lays up a store of water in the cup formed at the end of its leaves, which is probably secreted from the air, and applied to the exigencies of the plant when exposed to drought; and the quantity which is known to vary in the hothouse, is no doubt connected with the state of moisture of the atmosphere.

These considerations must be sufficient, I imagine, to place in a strong light the necessity of a strict attention to the atmosphere of vapour in our artificial climates, and to enforce as absolute an imitation as possible of the example of nature. The means of effecting this is the next object of our inquiry.

Tropical plants require to be watered at the root with great caution, and it is impossible that a sufficient supply of moisture can be kept up from this source alone. There can, however, be no difficulty in keeping the floor of the house and flues constantly wet, and an atmosphere of great elasticity may thus be maintained in a way perfectly analogous to natural process. Where steam is employed as the means of communicating heat, an occasional injection of it into the air may also be had recourse to; but this method would require much attention on the part of the

superintendent, whereas the first cannot easily be carried to excess.

It is true that damp air, or floating moisture of long continuance, would also be detrimental to the health of the plants, for it is absolutely necessary that the process of transpiration should proceed; but there is no danger that the high temperature of the hot-house should ever attain the point of saturation by spontaneous evaporation. The temperature of the external air will always keep down the force of the vapour; for as in the natural atmosphere the dew-point at the surface of the earth is regulated by the cold of the upper regions, so in a house the point of deposition is governed by the temperature of the glass with which it is in contact. In a well ventilated hot-house, by watering the floor in summer, we may bring the dew-point within four or five degrees of the temperature of the air, and the glass will be perfectly free from moisture; by closing the ventilators, we shall probably raise the heat 10 or 15 degrees, but the degree of saturation will remain nearly the same, and a copious dew will quickly form upon the glass, and will shortly run down in streams. A process of distillation is thus established, which prevents the vapour from attaining the full elasticity of the temperature.

The action is beneficial within certain limits, and at particular seasons of the year; but when the external air is very cold, or radiation proceeds very rapidly, it may become excessive and prejudicial. It is a well known fact, but one which, I believe, has never yet been properly explained, that by attempting to keep up in a hot-house the same degree of heat at night as during the day, the plants become scorched. From what has been premised, it will be evident that this is owing to the low temperature of the glass, and the consequent low dew-point in the house, which occasions a degree of dryness which quickly exhausts the juices.

Much of this evil might be prevented by such simple and cheap means as an external covering of mats or canvass.

The heat of the glass of a hot-house at night, does not probably exceed the mean of the external and internal air; and taking these at 80° and 40°, 20° of dryness are kept up in the interior, or a degree of saturation not exceeding 528°. To this in a clear night, we may add at least 6° for the effects of radiation, to which the glass is particularly exposed, which would reduce the saturation to 434°, and this is a degree of drought which

must be nearly destructive. It will be allowed that the case which I have selected is by no means extreme, and it is one which is liable to occur even in the summer months. Now, by an external covering of mats, &c., the effects of radiation would be at once annihilated, and a thin stratum of air would be kept in contact with the glass, which would become warmed, and consequently tend to prevent the dissipation of the heat. But no means would of course be so effective as double glass, including a stratum of air; indeed, such a precaution in winter seems almost essential to any great degree of perfection in this branch of horticulture. When it is considered that a temperature at night of 20° is no very unfrequent occurrence in this country, the saturation of the air may, upon such occasions, fall to 120° , and such an evil can only at present be guarded against by diminishing the interior heat in proportion.

By materially lowering the temperature, we communicate a check which is totally inconsistent with the welfare of tropical vegetation. The chill which is instantaneously communicated to the glass by a fall of rain or snow, and the consequent evaporation from its surface, must also precipitate the internal vapour, and dry the included air to a very considerable amount, and the effect should be closely watched. I do not conceive that the diminution of light which would be occasioned by the double panes, would be sufficient to occasion any serious objection to the plan. The difference would not probably amount to as much as that between hot-houses with wooden rafters and lights, and those constructed with curvilinear iron bars, two of which have been erected in the garden of the Horticultural Society. It might also possibly occasion a greater expansion of the foliage; for it is known, that in houses with a northern aspect, the leaves grow to a larger size than in houses which front the south. Nature thus makes an effort to counteract the deficiency of light, by increasing the surface upon which it is destined to act.

The present method of ventilating hot-houses is also objectionable, upon the same principles which I have been endeavouring to explain. A communication is at once opened with the external air, while the hot and vaporous atmosphere is allowed to escape at the roof; the consequence is, that the dry external air rushes in with considerable velocity, and becoming heated in its course, rapidly abstracts the moisture from the pots and foliage. This is the more dangerous inasmuch as it acts with a rapidity

proportioned in a very high degree to its motion. I would suggest, as a matter of easy experiment, whether great benefit might not arise from warming the air to a certain extent, and making it traverse a wet surface before it is allowed to enter the house.

There is one practice universally adopted by gardeners, which is confirmatory of these theoretical speculations; namely, that of planting tender cuttings of plants in a hot bed, and covering them with a double glass. Experience has shown them that many kinds will not succeed under any other treatment. The end of this, is obviously to preserve a saturated atmosphere; and it affords a parallel case to that of Dr. Wells, of the anticipation of theory by practice.

The effect of keeping the floor of the hot-house continually wet, has been already tried at the Society's garden, at my suggestion, and it has been found that the plants have grown with unprecedented vigour; indeed their luxuriance must strike the most superficial observer.

To the human feelings, the impression of an atmosphere so saturated with moisture is very different from one heated to the same degree without this precaution; and any one coming out of a house heated in the common way, into one well charged with vapour, cannot fail to be struck with the difference. Those who are used to hot climates, have declared that the feel and smell of the latter exactly assimilate to those of the tropical regions.

But there is a danger attending the very success of this experiment, which cannot be too carefully guarded against. The trial has been made in the summer months, when the temperature of the external air has not been low, nor the change from day to night very great. In proportion to the luxuriance of the vegetation, will be the danger of any sudden check; and it is much to be feared, that unless proper precautions are adopted, the cold long nights of winter may produce irreparable mischief.

I am aware that a great objection attaches to my plan of the double glass, on account of the expense; but I think that this may appear greater at first sight than it may afterwards be found to be in practice. It is, however, at all events, I submit, a point worthy of the Horticultural Society to determine; and if the suggestion should be found to be effective, the lights of many frames which are not commonly in use in winter, might, without much trouble, be fitted to slide over the hot-houses during the severe season; and in the spring, when they are wanted for other pur-

poses, their places might be supplied at night by mats or canvas.

The principles which I have been endeavouring to illustrate should be, doubtless extended to the pinery and the melon frame, in the latter of which a saturated atmosphere might be maintained by shallow pans of water. An increase in the size of the fruit might be anticipated from this treatment, without that loss of flavour which would attend the communication of water to the roots of the plants.

I have but few additional observations to offer upon the artificial climate of a green-house. The remarks which have been made upon the atmosphere of the hot-house are applicable to it, though not to the same extent. The plants which are subject to this culture seldom require an artificial temperature greater than 45° or 50° , and few of them would receive injury from a temperature so low as 35° . When in the house, they are effectually sheltered from the effects of direct radiation, which cannot take place through glass; but the glass itself radiates very freely, and thus communicates a chill to the air, which might effectually be prevented by rolling mats. With this precaution, fire would be but rarely wanted in a good situation to communicate warmth; but in this damp climate it may be required to dissipate moisture. The state of the air should be as carefully watched with this view, as where a high temperature is necessary to guard against the contrary extreme. Free transpiration, as I have before remarked, is necessary to the healthy progress of vegetation; and when any mouldiness or damp appears upon the plants, the temperature of the air should be moderately raised, and free ventilation allowed. When the pots, in the proper season, are moved into the open air, it would contribute greatly to their health, and preserve them from the effects of too great evaporation, to imbed them well in moss or litter: as a substitute for this precaution, the plants are generally exposed to a northern or eastern aspect, where the influence of the sun but rarely reaches them, but which would be very beneficial if their roots were properly protected. The advantage of such a protection may be seen when the pots are plunged into the soil, a method which communicates the greatest luxuriance to the plants, but unfits them to resume their winter stations.

When a green-house is made use of, as it often is after the removal of the pots, to force the vine, the same precautions should be attended to as in the management of the hot-house, and the

elasticity of the vapour should be maintained by wetting the floor but after a certain period, a great degree of dryness should be allowed to prevail, to enable the tree to ripen its wood, and form the winter productions for its buds. In this its treatment differs from that of the tropical plants, which require no such change, and to which, on the contrary, it would be highly detrimental. The same observation applies to forcing-houses for peaches, and other similar kind of trees. As soon as the fruit is all matured, they should be freely exposed to the changes of the weather.

HORT. TRANSACTIONS.

ARTICLE VI.

ON ORNAMENTAL PLANTING.

BY J. STUART MENTEITH, ESQ. OF CLOSEEURN.

HAVING perused the following article with great satisfaction, we have been induced to insert it in the Cabinet from the belief that it will be both interesting and beneficial to our readers:—

A taste for improvement of this kind has, no doubt, already commenced amongst us; but it might be greatly promoted by calling the attention of the public more frequently to the beauties and advantages of this species of ornament.

The few following hints are offered for the purpose of awakening a taste for this elegant pursuit.

Though there are not many ornamental plants natives of Scotland, yet nature has furnished not a few which may be readily naturalized to our climate.

Of these there are various kinds and varieties; and to select from among them what will best answer particular soils and situations, must be left to the skill of individuals. Those which we are about to enumerate, with few or no exceptions, thrive in most ordinary situations, or in any soil.

The following, denominated the tree-evergreens, deserve the first attention, viz., the Scotch, the silver, and the spruce firs. The last is by far the handsomest of the fir tribe, having its branches long and tapering, beautifully curved or bended upwards, and with its tall elegant stem rising like a lofty pyramid, towers over all the trees of the grove.

The cedars require a more sheltered situation, and with that indulgence, there are few places in Scotland in which they would not grow.

A great number of the evergreen shrubs may be easily and quickly raised in Scotland. The spurge laurel, the common or bay laurel, the Portugal laurel, and sweet scented bay laurel, from which the poet gathers his wreath, will thrive in most situations. The last is more delicate ; but with a little care in severe winters, it may be reared. The laurustinus grows almost any where, and has the peculiar quality that it will, if the winter be mild, be in bloom at that season. A variety with shining leaves, lately introduced, will be found preferable. The strawberry tree, or arbutus fluedo ; the holly, and the evergreen thorn, or mespilus pyracantha, with their deep blood-red berries, are strikingly beautiful. Of the yew, the holly, and the evergreen-privet, hedges can be formed, and they are most pleasing of all objects to shelter our winter walks. The pyracantha, the ivy, particularly the large-leaved Irish variety, the *Pyrus japonica*, and the *Rosa indica*, which bloom in winter and early spring, are well fitted for ornamenting walks.

Of the American evergreens, several may be domesticated with us, such as various species of rhododendron, and of kalmia, all of which give an interest and beauty to our shrubbery. Many of the smaller but not less beautiful evergreen plants, are to be found ; as all the varieties of the periwinkle, with its pretty blue flower ; the daphne, and the heaths. Of the last of these are about twenty hardy varieties, fit to stand our climate, flowering at different times of the year, and bearing a certain degree of clipping with the shears. These are admirably adapted to form the fringe or edging of the flower-garden ; much superior, from their delicately formed flowers, to the box, as the present to the eye a continued succession of varied colours.

All the above mentioned evergreens are easily propagated. Some of them, requiring a little nicety in managing the young plants when raised from seeds, are more readily grown by slips, or laying in the branches. With all these methods of raising them every gardener is acquainted.

Having described the means of ornamenting our residences during winter, we have now to mention those plants by which they may be embellished in the other seasons of the year ; and for that purpose it is recommended to plant more of the flower-

ing trees and shrubs in our woods and shrubberies: such as the horse-chesnut, the lime, the mountain ash, the elder, which is readily propagated from cuttings, and growing well on elevated situations, is fitted to make excellent hedges in upland countries,—sheep and cattle will not browse it; the geen or wild cherry, the Siberian crab, the laburnum, the acacia (*Robinia pseud-acacia*), the lilac, particularly the liberian or varin, the azalia of different species, the variegated thorn, *Aucuba japonica*, *Pittosporum tabiri*, and such like. These being planted in fit places, would, by their fragrance and flowers, add much to the comfort and beauty of our dwellings.

The advantages of planting such evergreens and ornamental trees and shrubs around our houses, are obvious: they will afterwards afford shelter and warmth; and if walks or avenues of them were formed, they would present us, in the dreary, naked, cold season of winter, when the other trees are stripped of their foliage, always something on which the eye might rest, and on which it might be refreshed. Besides, most of the evergreens, from their varnish-coated leaf, have the peculiar property of suffering little injury from the drop of the taller forest trees, and consequently they will grow under the shade. Nay, some of them, as the rhododendron, will be found more at home under such shade, than when exposed to the glaring sun. In North America, this forms much of the underwood of the immense forests that cover that vast continent. Intermingled with other planting, these evergreens will afford the sportsman the best of all covers for game; and the lover of the music of nature's sweet concert, will find them always the favourite resort of the most interesting part of feathered creation—the birds of song.

There is no doubt that such improvements are best fitted, or most suitable, to the taste and circumstances of the higher ranks, and must of course begin with them. It is, however, very desirable that the cultivation of the ornamental plants should not be exclusively confined to the palace, but that it should also be extended to the cottage. This might be accomplished at little or no expense, as most of the cottages in Scotland are wisely allowed by the proprietors or land-holders to have a garden. A spot is accordingly ready prepared to receive such plants; and if a little encouragement were given to the landlord, some plants gratuitously distributed, and a few kind words spoken, we should, in a short time, see the cottages and their gardens, which now too

often present any thing rather than order or neatness, assuming a gay appearance ; and their walls, which now are generally naked and cheerless, would be covered with some or other of the evergreens, mixed with the jessamine and the rose, the Virginia creeper, and the prettiest of all Scotland's wild plants—the woodland.

From such improvements in their gardens, it may reasonably be expected that the inmates of the cottages would gain not a little in point of taste and good feeling ; order and cleanliness would supplant disorder and filthiness ; and, above all, if the cottage child, during his hours of leisure and relaxation, were trained to look after, and take an interest in a few flowers and evergreens, he would, from such salutary and healthful occupations, form a kind of attachment to the vegetable kingdom, and instead of wantonly destroying, impairing, or cutting the trees, of which we have so many disgraceful proofs, he would feel a disinclination to offer them any injury.

The mutilating of statues, even in our church yards, the destruction of the cope stones of walls and bridges, and of the very mile stones on our public highways, are instances of wanton mischief which we believe to be more often seen in Scotland than elsewhere, and it is a disgrace to the most enlightened and virtuous peasantry in the world. We have sometimes thought that this moral phenomenon is to be traced to the remains of the spirit of destroying statues and temples, to which the horrors of the oppression, usurpations, selfishness, and corruptions of the Church of Rome, drove our ancestors at the era of the Reformation. Means ought to be employed to counteract this tendency and that which we have suggested may not be altogether devoid of use in this respect.

It is well known how much a regard for the lower animals is cherished by youth, by having some favorite to look after and fondle ; and how indifferent to the brute creation, and how reckless of human life, are those who have never been accustomed to take an interest in it. On the same principle, those who have been brought up in heaths and districts bare of wood, are generally observed to do the most wanton mischief to trees.

With a view to such objects, it might be advisable to attach to every parochial school, indeed to all schools, a small plat of garden ground, ornamented with flowers, and most of the plants used for domestic purposes. Such a garden, but upon a larger

scale than would be adopted in ordinary schools, is to be seen at the academy of Dollar, to which the youth have constant access.

It should also be made a part of the master's duty to direct the attention of his scholars to the plants of the garden, to teach them their history, describe their uses, and point out their culture. All this might be easily done, as any master could soon learn all that it is useful to know of such plants, and take pleasure in communicating this knowledge to his youthful charge; and it might be so conducted as to cause little or no interruption to the other laborious exercises of the school. The instructions given as a recreation in the play hours would not be the least valuable, as knowledge is always more readily acquired by the young when it is possible to combine pleasure with mental exertion. As the parochial clergy are now so attentive to this taste for adorning their own dwellings, they would no doubt readily take an interest in such a plan, and encourage the love of it in the school-master and his pupils. Such gardens, small in extent, might be laid out at little expense. They should be kept in order by the master, with the assistance of his scholars, who would soon take much interest and delight in such occupations. Any trifling expense the proprietor might be at in ornamenting these small gardens around the parochial school house, would be amply repaid in the security of his woods from the mischievous schoolboy's knife.

HORT. TRANSACTIONS.

ARTICLE VII.

ON WATER AND WATERING PLANTS.

(Continued from page 227.)

"In other glasses he dissolved several sorts of earth clayey marles, and variety of manures, &c., and set mint in distilled water, and made other experiments of several kinds, to get light and information, as to what hastened or retarded, promoted or impeded vegetation.

"The glass P, was Hyde Park conduit-water: in this he fixed a glass tube ten inches long, the bore about one sixth of an inch diameter, filled with very fine and white sand, which he kept from falling down out of the tube into the phial, by tying a thin piece of silk over that end of the tube that was downwards.

"Upon immersing the lower end of it into the water, this (by little and little) ascended quite to the orifice of the tube : and yet in all the fifty six days that it stood thus, a very inconsiderable quantity of water had gone off, viz. scarcely twenty grains, though the sand continued moist up to the top until the very last.

The water had imparted a green tincture to the sand, quite to the very top of the tube : and in the phial it had precipitated a greenish sediment mixed with black.

Pretty much of the green substance, described above, adhered to the bottom and sides of the tube, as far as it was immersed.

Other like tubes he filled with cotton, lint, pith of elder, and several other porous vegetable substances ; setting some of them in clear water, others in water tinged with saffron, cochineal, &c. and made several other trials, to give a mechanical representation of the motion and distribution of the juices in plants, and some other phænomena observable in vegetation.

Several plants being also set in phials, Q, R, S, &c., were ordered after the same manner with those above, in the following colder months ; these throve not near so much, nor did the water ascend in nigh the quantity it did in the hotter seasons, in which the before cited trials were made.

From these experiments, the observations proceed.

Observation 1. In plants of the same kind, the less they are in bulk, the smaller quantity of the fluid mass in which they are set, is drawn off ; the dispendium of it, where the mass is of equal thickness, being pretty nearly proportioned to the bulk of the plant.

Thus the plant in the glass marked A, that weighed twenty-seven grains, drew off but two thousand five hundred and fifty-eight grains of the fluid ; and that plant in B, that weighed twenty-eight and one-fourth, took up bu four thousand and four grains of the fluid ; whereas that plant in H, which weighed one hundred and twenty-seven grains, took up fourteen thousand one hundred and ninety grains of the liquid mass.

The water seems to ascend up the vessels of plants, much after the same manner as up a filter ; and it is no strange thing, that a larger filter should draw off more water than a lesser one ; or a plant, that has more and larger vessels, should take up a greater share of the fluid in which it is set, than one that has fewer and smaller ones can.

This he does not note, as a thing very considerable in itself, but chiefly in regard to what he is to offer anon; and that it may be seen, that in other collations of things he has made due allowance for this difference.

Observation 2. The much greatest part of the fluid mass that is first drawn off, and conveyed into the plants, does not settle or abide there, but passes through the pores of them, and exhales up into the atmosphere.

It is certain that the water in these experiments ascended only through the vessels of the plants. The glasses F and G which had no plants in them, though they were disposed of in the like manner as the rest were, remained at the end of the experiment as at first, and none of the water was gone off: and it is certain, that the greatest part of it flies off from the plant into the atmosphere.

“The least proportion of the water expended, was to the augmentation of the plant, as forty-six or fifty to one; and in some the water drawn off was a hundred, two hundred, nay, in one above seven hundred times as much as the plant had received of addition.

This so continual an emission and detachment of water, in so great plenty from the parts of plants affords a manifold reason why those countries which abound with trees and the larger vegetables, especially, should be very obnoxious, owing to damps, great humidity in the air, and more frequent rains than others which are more open and free.

The great moisture in the air was a mighty annoyance to those who first settled in America, which then was much overgrown with woods and groves; but as they were burnt and destroyed to make room for habitations and the culture of the earth, the air mended, and cleared up apace, and became of a temperature much more dry and serene than before.

Nor does this humidity go off pure and alone, but usually carries out along with it many parts of the same nature, whereof the plants, through which it passes, do consist.

It is true, the crasser are not so easily born up into the atmosphere, but are usually deposited on the surface of the flowers, leaves, and other parts of the plants. Hence are produced our mannas, our honies, and other gummous exudations of vegetables.

But the finer and lighter parts are, with so much the greater

ease they are sent up into the atmosphere ; and thence are conveyed to our organs of smelling, by the air we draw in by respiration, and are either pleasant or offensive, beneficent or injurious to us, according to the nature of the plants from whence they arise.

And since these owe their rise to the water which ascends out of the earth through the bodies of plants, we cannot be far to seek for the cause why they are more numerous in the air ; and we find a greater quantity of odours exhaling from vegetables, in warm, humid seasons, than in any other whatever.

Observation 3. A great part of the terrestrial matter, that is mixed with the water, ascends up into the plant, as well as the water.

At the end of the experiment, there was much more terrestrial matter in the water of the glasses F and G, that had no plants in them, than in those that had plants. The garden mould in the glasses K and L was considerably diminished and carried off : nay, the terrestrial and vegetable matter was born up in the tubes filled with sand, cotton &c. and in that quantity, as to be evident even to the sense. And the bodies in the cavities of the other tubes, which had their lower ends immersed in water, wherein Saffron, Cochineal, &c., had been infused, were tinged with yellow, purple, &c.

If it may be permitted to look abroad a while towards the shores and parts within the verge of the sea, there will be found a large scene of plants, that along with the vegetable, take up the mere mineral matter also in great abundance ; such as Sea-Purslains, the several sorts of Alga's Samphires and other marine plants.

These contain common sea-salt, which is all one with the fossil, in such plenty, as not only to be plainly distinguished on the palate but may be drawn forth from them in considerable quantities. And some affirm, that there are plants found that will yield nitre and mineral salts.

As to vegetable matter, it is manifest how apt and how much disposed it is (being so very fine and light) to attend water in all its motions, and to follow it into each of its recesses, not only from those instances that have been alledged above, but from many others.

If you percolate it with all the care imaginable, if you filter it with never so many filtrations, yet there will remain some ter-

restrial matter: it is true, the fluid will be thinner every time than other, and more disengaged from the same matter, but never wholly free and clear. He says he has filtered water through several, wholly, free, and clear sheets of thick paper, and after that through very close and fine cloth, twelve times doubled, nay, has done this over and over again, and yet after all there was a considerable quantity of this matter discoverable in the water.

Now, if it passes thus through interstices that are so very small and fine, along with the water, it is less strange that it should attend in its passage through the ducts and vessels of plants.

It is true that filtering and distilling of water does intercept and make it quit some of the earthy matter it was before impregnated with; but then that which after this continues with the water is fine and light, and consequently such as in a peculiar manner is fit for the growth and nourishment of vegetables; and this is the case of rain-water.

The quantity of terrestrial matter that it bears up into the atmosphere is not great; but that which it does bear up is mainly of that light kind, of vegetable matter, and also that perfectly dissolved, and reduced to single corpuscles, all fitted to enter the tubules and vessels of plants; and upon this account it is that rain-water is so fertile and prolific.

The reason why, he says in this proposition, that only a great part of the terrestrial matter, that is mixed with the water, ascends up with it into the plant, is, because all of it cannot.

The mineral matter is a great deal of it not only gross and ponderous, but scabrous and inflexible, and so not disposed to enter the pores of the roots; and a great many of the simple vegetable particles do by degrees unite and form some of them small clods or *Moleculæ*, such as before mentioned in H. K. and L, sticking to the extremities of the roots of those plants.

Others of them entangle in a more loose manner, and form the *Nubeculæ*, and great bodies, that are commonly observed in stagnant water. When these are thus conjoined, they are too big to enter the pores, which they might have done singly.

(To be continued.)

- REVIEW.

The Suburban Gardener and Villa Companion;—By J. C. LONDON, F. L. S., H. S., &c.; London: Longman, & Co.

(Continued from p. 259.)

Primula vulgaris, the double, white, double red, and double lilac primroses.
Primula elatior, the double oxlip.
Primula Auricula, different border varieties of auricula.
Primula vulgaris Polyanthus, varieties of double and single polyanthus
Arabis rosea and *albida*, white and red urabis, or wall-cress.
Adonis vernalis, spring-flowering adonis, yellow.
Anemone apennina, alpine anemone, blue.
Iris pumila, dwarf iris, blue.
Omphalodes verna, spring-flowering Vernus's navelwort, blue.
Orobus vernus, spring bitter vetch, purple.
Corydalis bulbosa, the bulbous-rooted fumitory, red.

April.

Phlox subulata and *setacea*, awl-leaved and bristly-leaved phlox, red.
Corydalis longiflora, long-flowered fumitory, red.
Aquilegia canadensis, Canadian columbine, red.
Dodecatheon Meadia, Mead's Virginian cowslip, lilac.
Lychnis Viscaria, the bladder Lychnis, red.
Arabis alpina, alpine arabis, or wall-cress, white.
Anemone nemorosa, the wood anemone, white.
Phlox nivea, the snowy phlox, white.
Draba aizoides, whitlow grass, yellow.
Alyssum saxatile, rock madwort, yellow.
Phlox divaricata, spreading phlox, blue.
Anemone pratensis, meadow anemone, blue, and *A. Pulsatilla*, pulsatilla anemone, purple.

Anemone coronaria, the common anemone, variegated.

May.

Pæonia officinalis, numerous varieties of the common pæony, crimson, red, and white.
Papaver brateata and *corientalis*, scarlet poppies.
Campanula glomerata, double and single white and blue bell-flower.
Dianthus Caryophyllus, different varieties of the common pink, clove, and carnation, white, red and variegated.
Lupinus polyphyllus, purple and white lupine.
Iberis Tenoreana, Tenore's candy-tuft, white.
Lamium album, white dead nettle.
Orobus angustifolius, narrow-leaved bitter vetch, white.
Ranunculus aconitifolius fl. pl., the double white bachelor's buttons, or fair maid of France.
Tradescantia virginica, white and purple spiderwort.
Geranium pratense, purple and white-flowered crane's bill.
Alyssum creticum, Cretan madwort.
Mimulus moschatus, yellow musk plant.
Mimulus luteus rivularis and *guttatus*, varieties of the monkey flower, yellow and brown.
Galaridia bicolor and *aristata*, yellow and red galardias.
Asphodelus luteus, yellow asphodel.
Ranunculus acris fl. pl., the double yellow bachelor's buttons.
Linaria alpina, blue toadflax.
Phlox procumbens, trailing phlox, blue.
Aquilegia grandiflora and *vulgaris*, purple and common columbine.
Lathyrus venosus, blue and purple pea.
Lupinus perennis, perennial lupine, blue.

Pulmonaria virginica, Virginian lungwort, blue and purple.
Nepeta grandiflora, large-flowered cat-mint, blue.
Anchusa italica, Italian buglos, blue.
Aster alpinus, alpine starwort, purple.
Lamium Orvala, purple dead nettle.
Pentstemon atropurpureus, campanulatus, and diffusus, dark purple, bell-flowered, and spreading pentstemons.
Anemone hortensis, garden anemone, variegated.
Verbasum cupreum and ferrugineum, the copper-coloured and rusty mullein, variegated.

June.

Dianthus alpinus, deltoides, and atropurpureus, varieties of pinks, red.
Silene acaulis, the stemless catchfly, red.
Valeriana dioica, common red rian.
Orobis sylvaticus, wood vetch, red.
Antirrhinum majus, double, single, white, red, and variegated snapdragon.
Lychnis chalcidonica, the scarlet lychnis.
Lychnis diurna, the rose campion, red.
Aconitum Napellus, the common monk's-hood, purple.
Lathyrus grandiflorus, the large-flowered pea, red.
Campanula rotundifolia, purple and white bell-flower.
Oenothera speciosa, the showy evening primrose.
Hesperis matronalis fl. pl., double white rocket.
Dictamnus albus, white fraxinella.
Linum perenne, perennial flax, white.
Polemonium cæruleum and album, the common purple and the white Greek valerian.
Asphodelus ramosus, the branchy asphodel, white.
Epilobium angustifolium, white and red French willow-herb, red.
Caltha palustris fl. pl., double-flowered marsh marigold, yellow.
Oenothera macrocarpa, and other species of evening primroses, yellow.
Aconitum grandiflorum, and other species and varieties of monk's-hood.

Chryseis (Eschscholtzia) californica, Californian eschscholtzia, yellow.
Asphodelus luteus, yellow asphodel.
Trollius europæus, common globe flower, yellow.
Pentstemon confertus, crowded pentstemon, yellow.
Geghiana lutea, yellow gentian.
Ajuga pyramidalis, the pyramidal bugle, blue.
Delphinium elegans, and various garden species and varieties of larkspur, blue and purple.
Iris germanica, the German iris, blue and white.
Pentstemon speciosus, showy pentstemon, blue.
Lamium maculatum, spotted dead nettle, purple and reddish lilac.
Lychnis diurna, rose campion, red and white.
Verbena Lamberti, Lambert's verbena, purple.
Verbasum phœniceum, dark purple mullein.
Dictamnus Fraxinella, purple fraxinella.
Anchusa angustifolia, narrow-leaved bugloss, blue and purple.
Geranium lancastriense, the Lancaster crow's bill, variegated.

July.

Oenothera rosea, red evening primrose.
Phlox stolonifera, glaberrima, pyramidalis, and various other phloxes, red, lilac, and purple.
Veronica incarnata, the flesh-coloured speedwell.
Saponaria officinalis, and fl. pl., single and double soapwort, red and white.
Monarda didyma, scarlet monarda.
Chelone barbata, the bearded chelone, red.
Lathyrus tuberosus, the tuberous-rooted vetch, red.
Campanula persicifolia, double and single white peach-leaved bell-flower.
Gentiana Saponaria, soapwort-leaved gentian, white.
Phlox suaveolens, the sweet-scented phlox, white.
Alyssum montanum, mountain madwort, yellow.
Galardia aristata, bristly galardia, yellow.

Coreopsis grandiflora, large-flowered coreopsis, yellow.
Hypericum Elatum, St. John's wort.
Dracocephalum grandiflorum, large-flowered dragon's head, blue.
Campanula carpatica, Carpathian bell-flower, blue.
Veronica azurea, *maritima*, and others, different kinds of speedwell, blue.
Aster alpinus and *amelloides*, purple asters.
Statice reticulata, purple sea lavender.
Pentstemon atropurpureus, and various purple-flowered species of pentstemon.
Lobelia speciosa, showy lobelia, purple.
Lythrum Salicaria, willow herb, purple.
Monarda fistulosa, purple monarda.

August.

Veronica carnea, flesh-coloured speedwell.
Pentstemon angustifolius, narrow-leaved pentstemon, red.
Phlox pyramidalis, and other red phloxes.
Gypsophila prostrata, trailing gypsophila, white.
Aster albus, white aster.
Coreopsis tripteris, *aurea*, and *verticillata*, and different kinds of yellow coreopsis.
Gentiana asclepiadea, *asclepias*-like gentian, blue.
Commelina erecta, upright commelina, blue.
Aster spectabilis and *Novi Belgii*, New York asters, blue.
Verbena venosa, veiny verbena, blue.
Aster alpinus, purple asters.
Stenactis speciosa, showy stenactis, purple.
Lythrum virgatum, twiggy willow herb, purple,
Aster concolor, self-coloured aster, purple.

Campanula versicolor, variegated bell flower.
Calendula stellata, starry marigold, yellow.
Polygonum orientale, *persicaria*, red.

September and October.

Epilobium alpinum, alpine French willow herb, red.
Gentiana incarnata, flesh-coloured gentian, red.
Aster vimineus, twiggy aster, red.
Phlox triflora and *Wheeleriana*, three-flowered and Wheeler's phlox, red
Aster humilis, *diffusus*, and other dwarf-spreading and other asters, white.
Achillea cretica, Cretan milfoil, white.
Boltonia asteroides, aster-like boltonia, white.
Coronilla minima, the least coronilla, yellow.
Solidago humilis, dwarf golden rod, yellow.
Oenothera serotina, late evening primrose, yellow.
Gentiana Catesbaei and others, Catesby's and other gentians, blue.
Scabiosa australis, the southern scabious, blue.
Aster corymbosus, *spectabilis*, and others, different kinds of asters, blue.
Veronica elatior, the taller speedwell, blue.
Statice reticulata, the netted sea lavender, purple.
Gentiana intermedia, intermediate gentian, purple.
Phlox Carolina and *suffruticosa*, Carolina and suffruticose, or half-shrubby, phloxes, purple.
Aster Novæ Angliæ and others, New England asters, purple.
Veronica altissima, the highest speedwell purple."

THE BIBLE GARDEN,—containing a brief description of all the Trees and Plants mentioned in the Holy Scriptures; by JOSEPH TAYLOR. The Illustrations selected and etched on Steel by W. H. BROOKE, F. S. A.—London: Dean & Munday, 1836.

PALM TREE

Phœnix dactylifera.

"AND they came to Elim, where were twelve wells of water and three score and ten *palm-trees*: and they encamped there by the waters."—*Exodus*, xv. 27.

"THE Palm-tree is found in a variety of the warm countries in the south of Asia, and the north of Africa; they were numerous on the banks of Jordan, but the best were those around Jericho and Engiridi, which latter place is for that reason called Hazazon-tamor, the cutting of the Palm-trees. This tree grows very tall and upright, and its leaves retain their greenness through the whole year; the more it is exposed to the sun the better is its growth.

Palm-trees produce but little fruit, till about thirty years old, after which while their juice continues, the older they become the more fruitful they are, and will bear three or four hundred pounds of dates every year. The date is a most sweet, luscious kind of fruit, on which most of the inhabitants of Persia, Arabia, and Egypt, entirely subsist.

A species of rich honey or syrup, and a spirituous fermented liquor called Arâky, are obtained from it; there is also extracted from the palm-tree a kind of wine, which is perhaps what the Scripture calls *shichar*, or strong drink.

As the sap is chiefly in the top of the tree, when they intend to extract a liquor from it, they cut off the top, where there is always a tuft of spring leaves about four feet long, and scoop the trunk into the shape of a bason: here the sap ascending lodges itself at the rate of three or four English pints a day; for the first week or fortnight, after which it gradually decreases, and in six weeks or two months the whole juice will be extracted.

As palm-trees were accounted symbols of victory, branches of palm were carried before conquerors in their triumphs; and in allusion hereto, the saints are said to have *palms in their hands*, to denote the victory over sin, Satan, the world, the persecutions of Antichrist, &c. *Rev.* vii. 9.

A remarkable experiment to prove the fructification of this tree, occurs in the 47th volume of the Philosophical Transactions. There was a great palm-tree in the garden of the Royal Academy at Berlin, which flowered and bore fruit for thirty years, but the fruit never ripened, and when planted did not vegetate; this tree Linnæus discovered to be a female plant, and as there was no male palm in its vicinity, the flowers never came to maturity.

At Leipsic, twenty German miles from Berlin, was a male plant of this kind, from which, in April 1740, a branch of flowers was procured, and shaken, so that the dust, or farina, fell upon the flowers of the unfruitful tree. This experiment was so successful, that the palm-tree produced more than a hundred perfectly ripe fruit, from which they had eleven young palms; on repeating the experiment next year, the palm-tree produced above two thousand ripe fruit. This experiment fully established the fact attested by the ancients concerning the Palm-tree; which some have regarded as fabulous.

This tree exhibits great variety in fruit, size, quality, and colour: twenty different kinds have been enumerated. Perhaps no tree whatever is used for so many and such valuable purposes as the Palm, or date tree; even the stones are given to camels and sheep as food."

The Orchidaceæ of Mexico and Guatemala.—By James Bateman, Esq. Part I. Imp. folio. Ridgway and Sons, London, 1837.

The 1st. Part of this splendid work has appeared, (one of which we borrowed) 120 copies have been printed, and it is highly gratifying to learn that about eighty of them have been subscribed for. And the others will doubtlessly soon be bought up, when the copies of the subscribers are perused. In the introductory remarks the Author notices the great extent of this noble family of plants, and observes :—

“Asia, Africa, and America will, perhaps, be found to divide the species of the order amongst them into three nearly equal proportions (for the few which Europe produces need scarcely be taken into the account); and the closer we approach the tropics, the more numerous and beautiful they become. Arrived, at length, within the precincts of the torrid zone, we find them no longer ‘prone on the ground,’ as heretofore, but conspicuous on the branches of the most rugged trees of the dampest and wildest forests, attracting the eye of the naturalist from afar, by the dazzling brilliancy of their colours, or arresting his attention by their delicious fragrance. And here we must take occasion to observe, that, although plants of this description are not unfrequently termed ‘parasitic,’ the epithet is altogether misapplied; for, while the parasites prey upon the vital juices of their victims, and perish with them, the ‘epiphytes’ derive nothing but their stay, or local habitation, from the plants on which they have established themselves: and continue to flourish and flower, indifferent whether their supporters live or die. The great majority of the Orchidaceæ of the tropics belong to the latter, or epiphytic, class; there are, however, a few that do not, as was long ago observed by the same ingenious Rumphius to whom we have already had occasion to advert. After noticing, in terms of due commendation, the dignified habits of most of the tribe, he proceeds, with a sigh, to remark that ‘among these vegetable nobles, just as among the nobles of mankind, some degenerate individuals are ever to be found, who are on the ground always, and seem to constitute a class of their own.’ But it is not merely in their habits that the terrestrial species are placed below the epiphytes, they are also greatly inferior to them in singularity and beauty.

“The Orchidaceæ of each of the three great divisions of the globe have features of their own, so marked and peculiar, that, in most cases, a practised eye would have little difficulty in referring even a totally new form to its proper habitation. Thus, for example, the pendent stems and graceful flowers of many of the dendrobiums, ærides, and their allies, give a character of beauty and lightness to the orchidaceous flora of tropical India, which contrasts most strongly with the clumsy pseudobulbs of the bolbophyllums, or the long tails of the angræcums of Africa. Again, in America, the characteristic features are, the upright vegetation (as distinguished from the pendent) of the epidendrums, the long straggling flower-spikes of many of the oncidiums, and a much greater variety of grotesque and marvellous forms than is to be met with in any part of the Old World.

“The uses to which the plants of this family are applied are few; but, in several instances, highly romantic. In Demerara, that most dreadful of all poisons, the ‘Wourali,’ is thickened by the juice of the catasetums; and in Amboyna, the true ‘Elixir of Love,’ is prepared from the minute farina-like seeds of the *Grammatephyllum speciosum*, which plant has just been received in England, in a living state, from Mr. Cumming. We tremble for the consequences, if what Rumphius says of its properties be true; asserting, as he does, ‘Mulierem prosequi amore talem, a quo hauc farinam cum cibo, vel

potu, accepit' In Mexico, where the 'language of flowers' is understood by all, the Orchidaceæ seem to compose nearly the entire alphabet. Not an infant is baptised, not a marriage is celebrated, nor a funeral obsequy performed, at which the aid of these flowers is not called in by the sentimental natives, to assist the expression of their feelings. They are offered by the devotee at the shrine of his favourite saint; by the lover, at the feet of his mistress; and by the sorrowing survivor, at the grave of his friend; whether, in short, on fast days or feast days, on occasions of rejoicing, or in moments of distress, these flowers are sought for with an avidity which would seem to say that there was no sympathy like theirs;—thus 'Flor de los Santos,' 'Flor de Corpus,' 'Flor de los Muertos,' 'Flor de Maio,' 'No me Elvides' (or forget me not), are but a few names out of the many that might be cited to prove the high consideration in which our favourites are held in the New World. Nor are these the only honours that are paid to them; for Hernandez assures us that, in Mexico, the Indian chiefs set the very highest value on their blossoms, for the sake of their great beauty, strange figure, and delightful perfume; while in the East Indies, if Rumphius is to be credited, the flowers themselves positively refuse to be worn, except by princesses or ladies of high rank. In Honduras, again, the large, hollow, cylindrical stalks of a fine species of Epidendrum are made into trumpets by the little boys and girls of the country; and the pseudo-bulbs of several of the more succulent species are used instead of resin for the strings of their guitars. The following are, however, almost the only known instances in which the tribe do any direct service to mankind. The bulbs of *Maxillaria bicolor* contain a large quantity of an insipid watery fluid, which is greedily sucked by the poor native of Peru in the dry season. A fluid of a similar nature is obtained from what is probably a *lælia* in Mexico, and is administered as a cooling draught in fevers. From the roots of some of the orchises, even in Europe, the nutritive substance called 'salep' is obtained; in New Zealand, certain species, are of considerable importance as esculents; and, in Guiana, the soles of the shoemaker are much indebted to the viscid matter obtained from the catase-tums and cyrtopodiums, as are the poisoned arrows of the Indian. -In this list the vanilla is not included, as that plant has recently been separated (no doubt, most judiciously) by Dr. Lindley from the natural order Orchidaceæ, and constituted the type of a new order of its own." (page 3.)

The Drawings, Engravings, Colouring, &c. are in a very superior style: Every admirer of this truly interesting and beautiful flowering tribe of plants, who can afford the expense, ought to possess a copy of the work.

AGAVE AMERICANA.

We understand that the fine specimen of this magnificent exotic in the ladies' flower-garden at Clowance, the seat of Sir John St. Aubyn, Bart., is now in a state of blossoming, and upwards of two thousand of the flowers are expanded; and so richly are these blossoms supplied with honey, that it actually drops from them. From the vast number of flower buds, there is no doubt but this curious and interesting flower will continue in bloom for the space of five or six weeks. No fewer than one thousand three hundred and sixty persons have already seen and admired this most beautiful plant, and we have every reason to believe many hundreds more will be added to the number. (*West B. ion*, October 6, 1837.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

- 1.
- MIMULUS HARRISONIA*
- .
- Harrison's Mimulus*
- . [Pax. Mag. Bot. 173.

SCROPHULARINÆ. DIDYNAMIA ANGIOSPERMIA.

This very showy variety was raised in the nursery of Mr. Lowe of Clapton near London. It is from impregnation between *M. cardinalis*, and *M. roseus* being sown, the present variety was one of them. The habit of the plant approaches that of the vigorous *cardinalis*. The flowers that of *roseus* but they are much larger, and of a much finer rosy-red colour, than any we have seen produced by the most vigorous of *roseus*. It is very showy, growing three feet high, and we think the finest kind in cultivation in the country. It deserves a place in every flower garden or greenhouse.

- 2.
- MONACHANTHUS DISCOLOR*
- , var.
- VERIDIFLORENS*
- .
- Dingy Mint*
-
- flower, green flowered variety*
- , [Bot. Mag. 3601.

ORCHIDÆ. GYNANDRIA MONANDRIA.

A native of Demerara. The present variety has bloomed in the Glasgow Botanic Garden. The flower scape is about half a yard long producing a loose raceme of from seven to nine flowers, of a yellowish green colour nearly destitute of fragrance. Each flower is about an inch across. *Manachanthus*, from Monah, a monk; and *Anthos*, a flower.

- 3.
- ONCIDIUM LURIDUM*
- .
- Dingy flowered*
- . Bot. Mag. 3603.

ORCHIDÆ. GYNANDRIA MONANDRIA. SYNONYMS. *ONCIDIUM CUNEATUM*. *EPIDENDRUM GUTATUM*. *CYMBIDIUM GUTTATUM*.

The scape rises about three feet high, producing numerous flowers, each near two inches across; they are of a pale yellow with large brown confluent spots. It has bloomed in the collection at the Edinburgh Botanic Garden, where it had been received from Trinidad.

- 4.
- OXALIS ALBA*
- .
- White flowered Wood Sorrel*
- . [Brit. Flow. Gard. 398.

This species is probably a native of America, but of this there is no certainty. Dr. Neill of Edinburgh, possesseth the plant, and it has bloomed in that Gentleman's collection. The flower stem rises about nine inches high, one flowered. The flower is about an inch and a half across of a pure white.

- 5.
- CONVOLVULUS DIVERSIFOLIA*
- .
- Three lobed Convolvulus Major*
- .
-
- (Bot. Reg. 1988.)

An half hardy annual plant, a native of Mexico, seeds of which were sent to the London Horticultural Society, by G. F. Dickson, Esqr. The plant grows to about half the size of the *Convolvulus major*. The flowers too are about half the size of the *C. major*, of a fine azure blue, with five red plaits. The under side of the flower is rather inclined to a flesh colour. Altogether a very handsome flowering species, which would be very ornamental

to the flower garden. *Pharbitis*, from *pharba*; colour. Referring to the elegance and variety of colours in the flowers.

6. *PODOLOBIUM STAUROPHYLLUM*. *Cross leaved*, (*Pax Mag. Bot.* 171.

LEGUMINOSÆ. DECANDRIA MONOGYNIA. SYNONYME *PODOLOBIUM ACQUIFOLIUM*.

The plant is a native of New Holland. It is a highly ornamental greenhouse shrubby plant, growing from three to four feet high. It flowers most profusely, each flower is about half an inch across, of a fine rich yellow, having a deep red streak along the under side of the keel. It has bloomed in the very select collection of W. Bowes, Esqr., Broughton, near Manchester. *Podolobium*, from *podos*, a foot, and *lobos*, a pod.

7. *SCUTELLARIA ALPINA*, var. *SANGUINEA*. *Red Alpine scullcap*. [*Brit. Flow. Gard.* 399,

A hardy perennial plant, whose flower stalks rise to about five or six inches high, each terminating in a large headed spike of flowers, much resembling in form those of the common *Prunella vulgaris*. The blossoms are of a pretty reddish-purple, it continues in bloom a considerable time. It is a very showy flowering plant, very suitable for a rock work, or edging for a bed or border. It is cultivated at the Birmingham Botanic Garden. *Scutellaria*, from *scutella*, a little dish or saucer; alluding to the form of the calycine appendage.

8. *MILTONIA SPECTABILIS*, *Showy Miltonia*.

[*Bot. Reg.*

ORCHIDACEÆ. VANDEÆ. GYNANDRIA MONANDRIA.

This very beautiful species would appear to be a native of Brazil, and to have been brought into notice about the same time, both by George Barker, Esq. and Messrs. Loddiges: in the latter collection it flowered during July last. It is allied to and in habit resembles *Brassia*. The flowers are solitary but very large, of a whitish yellow above, and the lip or sepal of a rosy purple. Dr Lindley observes, I had promulgated the name of *Miltonia spectabilis* previously to hearing that Messrs. Knowles and Westcott had called the plant *Machrochillus Tryannus*, and as the former name was published a month earlier, the latter will have to give way.

"The genera *Brassia*, *Miltonia*, *Cyrtorchilum*, *Odontoglossum*, and *Oncidium*, are closely related, and no doubt form the nucleus of a group of Vandææ, the limits of which remain to be ascertained. Of these *oncidium* has a column with two ears and a distinct lobe; *Miltonia*, a column with two ears and an entire lip, partially united to the base; *Odontoglossum*, a winged column and entire lip, partially united to it at the base; *Cyrtorchilum*, a winged column and a distinct and entire lip; and finally, *Brassia* has a column that is neither winged nor eared, and a distinct entire lip. I say nothing of the tubercular process upon the lip of all the genera, for I do not see how they will serve with any certainty to distinguish them. Moreover, *Oncidium* and *cyrtorchilum* should have ungulate (narrowed part at the base, as in the pink and the carnation) sepals (floral leaves) and petals, while all the other genera have them sessile. While, however, such are the real distinction between these genera, I am by no means sure that all the species now stationed under them are rightly placed. But that is a question I cannot enter into at this time."

As standing connected with the above, the following species are also noticed:—

Cyrtorchilum Karwinshii—said to be a noble species, with flower two inches and a half in diameter; flowers blotched with brown on a yellow ground.

Odontoglossum Angustatum—three and a half inches in diameter, beauti-

fully blotched with brown, on a yellow ground. *Miltonia*, so named in compliment to a most distinguished patron of Floriculture, the Earl of Fitzwilliam.

9. *PHILIBERTIA GRACILLIS*, *Slender Philibertia*. [Brit. Fl. Gard.

ASCLETIADÆ. PENTANDRIA DIGNYIA.

"This new and well-marked species of a very distinct, hitherto little but known genus of the curious family of Asclepiadæ, was discovered by Mr. Tweedie, in the country between Buenos Ayres and Tucuman, and he forwarded seeds of it to his correspondents, under the name of green flowering *Asclepias* of saint Katherino."

The plant was raised in the garden of our worthy friend Dr. Neill, at Canonmills, near Edinburgh, and in other collections in the spring of 1836.

It is nearly allied to the genus *Sarcostema*; for the opportunity of figuring this plant, Mr. Don expresses himself indebted to Mr. James Macnab, of the Experimental Gardens, Edinburgh, and to Mr. Lawson, gardener to Mr. Neill, who also supplied him with the following information relative to its culture. "The specimen sent is from a plant raised here out of Tweedie's seeds, of 1836, collected between Buenos Ayres and Tucuman, last year; the plant grew about a foot and a half, and was very slender; I kept the plant all winter, trained to a rafter in theinery, where it retained its leaves, and it did not appear to suffer in being occasionally exposed to a little frost; very little fire having been employed.

10. *BEGONIA INSIGNIS*, *Noble-flowered Begonia*. [Bot. Reg

NAT. ORD. BEGONIACEÆ. CLASS MONOECIA POLYANDRIA.

An upright growing plant, with fleshy stems, of a green colour; leaves oblique, as are most of the genus, heart-shaped, oblong lanceolate, hairy, much gagged and serrated on a purple margin. The racemose clustered flowers are of a rose-colour, and produced in great profusion.

It is said to grow freely in a good greenhouse, but that it attains its greatest perfection, at least during its growing season, when placed in a stove. The season at which it flowers, renders it, as well as many of the same genus, desirable as a stove plant, bearing its largest clusters of beautiful rose-coloured flowers, in the months of December and January. "Many species are conspicuous for the size and richness of their foliage, but more from the greatness and the fineness of their blossoms." It was introduced from the Berlin Garden, and it is probably a Brazilian species. We have not, however, seen any wild specimens. *Begonia*, in compliment to M. Begon.

11. *TWEEDIA CÆRULEA*, *Blue-flowered*. [Brit. Fl. Gard. 407.

ASCLEPIDACEÆ. PENTANDRIA DIGNYIA.

Mr. Tweedie discovered this pretty flowering plant in Buenos Ayres. Plants were raised in the Glasgow Botanic Garden, where seeds were sent by Mr. Tweedie. Seeds have also been distributed to other places, so that the plant will soon become common. It is very ornamental, and deserves a place in every flower garden. The flower stems rise from two to three feet high, producing fine spikes of pretty blue flowers, the underside rather of a rosy colour. Each blossom is more than an inch across. *Tweedia* so named after the late Mr. Tweedie.

12. *ROSA INDICA*; var. *BLAIRII*, *Blair's New China Rose*.

This is a very handsome variety, raised a few years ago by Mr. Blair from seeds of the yellow China, impregnated by the pollen of the Tuscan. The flower is very double, the petals are yellowish towards the base, and some of them striped towards the middle.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A NEW ARCTOTIS.—Let me mention that I had an *Arctotis* in flower during the summer sent from the Cape under the name of *A. dentata*, which species I cannot find in London's latest catalogues; it is a yellow flower, much like a marigold. When in flower, I will send you a drawing of it if you think it worthy of attention. Its name, I conclude, is derived from the leaves.

Arctotis's, if we had a leaf and description of its habit, it would afford us a better opportunity of judging of its specific distinction, and whether if it be entirely new to this country. A specimen left at our publishers would be forwarded to us. We should be glad of a drawing of the flower.—CONDUCTOR.

ON INDIAN BULBS.—I have just received some East Indian Bulbs, among others a *Crinum*, about a foot and a half long. Would you cover them entirely with earth, or, a nurseryman tells me, to insert four or five inches? I should like much that somebody would describe the treatment of them, whether they will do with greenhouse temperature, to be left on the shelf, or covered with ashes?

Planted at the depth above-named is quite sufficient. We hope some of our readers will furnish our correspondent with an article on their general culture at an early opportunity.—CONDUCTOR.

ON CALOCHORTUS.—Perhaps you, or some of your correspondents will inform me whether the varieties of *Calochortus* have been grown successfully in the open border, without being forwarded by a greenhouse temperature. Also where all the varieties are to be obtained, and at what price per bulb.

C. P. O.

ON A LIST OF HERBACEOUS PLANTS.—Mr. Brown has done the Florists great service by his List of Herbaceous Plants given in Vol. IV. page 274, and I hope Mr. Brown will favour us with a list of after species and varieties as soon as opportunity will permit.

A LOVER OF HERBACEOUS PLANTS.

ON A LIST OF DAHLIAS.—I hope Mr. Conductor you will furnish us with a list of all the new rare varieties of the Dahlias which have been exhibited at the different exhibitions this year, as early as possible which will much oblige a

DAHLIA GROWER.

We have a list in preparation, which will appear in January or February Numbers. We have visited nearly all the principal collections purposely to ascertain the merits of the best, and to take notes of them.—COND.

ANSWERS.

Being just returned from a tour round Norfolk, Essex, and Cambridgeshire, I am enabled to answer a query in page 211 concerning where *Delphinium Chinensis grandiflora* is to be obtained. Being in the line, I have visited many gardens lately, but saw the plant in none save at the botanic Garden,

at Bury St. Edmunds, where that and many other rare hardy plants grow in a style that we Londoners never dream of. AN OLD SUBSCRIBER.

ON KEEPING GERANIUMS IN WINTER.—If “Pedro” would rather keep his Geraniums in the ground during the winter, he has but to cut them down to within a few inches of it. I cover them with wool or cotton, tied tightly round the stems. Myrtles, he will find, make splendid plants in this manner.

Nov. 1st. 1837.

J. G.

REMARKS.

ON THE WIRE WORM.—Having seen many enquiries respecting the manner in which the wire worm might be destroyed, induces me to send you my method of treatment for their destruction. For nearly two or three seasons I had nearly all my Dahlia plants destroyed by these destructive pests the wire worm. After having tried various experiments, that of burnt earth succeeded entirely to my satisfaction, not having a plant the following season injured. Thinking this might prove beneficial to numbers of your readers, if you think it worth insertion it is at your service,—The burnt earth may be made, by burning the refuse of the garden in dry weather.

ON MANURES.—Manures which stand next to the mineral mixtures of sandy clay, and chalk, are Potash and Carbon, which may be obtained in a mass, cheaply and readily, by digging a hole, paving the bottom, and by putting into it all weeds and refuse vegetables, and occasionally a layer of quick lime, refuse water from the house, particularly soapsuds, (which contain potash), chamberlye, refuse from the pigs, cows, slop pail, &c., these will in a few months, be so decomposed and enriched by the aid of the lime, that a mass of potash and carbon will be obtained, and these are the origin and basis of all vegetables.

An accumulated mass of manure should never be allowed to have the liquor run away from it, for its very essence, is potash, (a piece of wood can have its potash washed out by continual running).—All dung heaps therefore, should have an earth under them, of a different nature to the soil which they are intended for as a dressing; for example, if we desire to enrich a heavy clay soil, we must have sand or road scrapings and a little lime, if it can be procured, laid under each dung heap; and if we desire to enrich a sandy loam, we must lay chalk and marl, or chalk and clay, under our dung-heaps. For the husbandry of manures and their increase, let all animals be kept with a sand, or other earth, under their litter at all times, to soak up the moisture; a turf might be lined over the stable, cow-house, or pig-sty, and removed every week, and thus would a great accumulation of vegetable stimulus be obtained, and this indeed would be a husbandman-like process—a gathering of gold.

STABLE DUNGS, which ferment, should be buried in the ground, as early as possible after coming from the horses, for every gas, or steam, which passes from it fermenting is a loss of its nutritive substance; for all manures are but a concentrated mass of gases: air, and water, or their component parts, are the bases of all manures which have vegetable origins.

SUGAR SCUM—is a favourite manure for those lands where there is a want of chalky matter, particularly on the sands, previously to a crop of turnips; but this scum is principally composed of lime; and a better article can be obtained from pounded chalk that has soaked up the juices from a dung-hill:

SOAP ASHES—are composed of lime, (converted again into chalk), and soda: this is a good and lasting dressing on a dry sandy soil.

ROUGH POTASH—from saltpetre works, is the best of all dressings; it is the vegetable itself concentrated in a state ready to enter at once into the fibres of young roots of plants, when aided by water.

LIME—when thrown over land, is quickly converted again into chalk, by imbibing from the air that acid which had been driven off by fire; hence chalk is as good if put on the land in the winter, because the frost acting on the water in it, expands and crumbles the article to pieces.

"SALT"—is a soda in union with an acid, and acts on land in the same manner as many other manures, by holding moisture for the service of vegetation; but the article of common salt does not enter so much into the composition of land vegetables, as the salt of potash, that is, saltpetre, or vegetable alkali, as it is called.

CHEAP EFFICACIOUS MANURE.—Raise a platform of earth on the headland of a field, eight inches high, and of any width and length, according to the quantity wanted. On the first stratum of earth lay a thin stratum of lime, from the kiln; dissolve or slake this with salt brine from the rose of a watering pot; add immediately another layer eight inches thick of earth, then lime and brine as before, carrying it to any convenient height. In a week it should be turned over, carefully broken, and mixed, so that the mass may be thoroughly incorporated. This compost has been used in Ireland—has doubled the crops of potatoes and cabbages, and is superior to stable dung.

GYPNUM—is a dressing used with a variety of effects on different lands, and for different purposes; it is a lime in union with sulphur, being a refuse from plaster makers. Those crops which are cut green, take up gypsum, which constitutes a part of their substance, such as sainfoin, clover, lucern, peas, tares, and such like crops. To these, this mineral dressing will be good, but it is injurious on a chalky land, and when animal and vegetable manures are easily obtained, it is not worth using; for they yield a sufficiency of gypsum to the soil. Sir H. Davy considered that an acre of tares took up several pounds of gypsum.

BONE DUST—is now a very favourite dressing for turnips, and indeed many other crops; it is principally composed of lime and phosphorous, which readily enter into the composition of grain, and all grasses. A portion of lime and phosphorous is also found in all milk, and goes to form the bones of young animals which suck; the staler the milk, the less phosphate of lime is there in it. This bone dressing for land, is a very expensive article, and should be cautiously used. Coal ashes, especially if laid under dung-heaps, are an excellent dressing for clays, by opening and enriching the soil, and like soot, impart a carbon or charcoal to the soil, of which all clays are deficient.

In all these manures we find lime an active principle, except in the salt dressings. Lime imbibes carbon, which is the woody principle, and also holds moisture for the service of vegetation. If we cannot procure large quantities of these manures, we must entice air and water to the roots of plants, by every means in our power; and this may be done with the greatest facility, by repeated movings of the surface, a hoeing being equal to a shower of rain.

There is another source of vegetable vigour, to be obtained without decayed vegetable, or mineral dressings. Land having had a trenching, when it can be done, and having had it lain up in ridges for the air, the sun, and the frost, to impregnate it with those gases which the soil requires, then may we proceed to sow seeds, let the soil be ever so single a mineral. If a bare sand, a dense clay, a shallow chalk, some seed may be found which is particularly adapted to the soil. Buckwheat, rye, tares, lucern, rape, white clover, trefoil, lotus; some one or other of these will grow readily in sandy land which has been so trenched without manures, and when grown they may be buried in a soil as manure for a spring crop. Potatoes, carrots, mangel-wurzel, and turnips, may be thus obtained, as well as spring corn crops, peas, and beans. All the cabbage tribe, red clover, beans, are congenial to the clays, and sainfoin is congenial to the chalks and loose soils."

COTTAGE FARMER.

ON THE TREATMENT OF LANTANA SELOWI AND LANTANA MUTABILIS, AS SUMMER BORDER PLANTS. BY F.H.S.—I wish to draw the attention of the lovers of Flora to those lovely plants *Lantana Selowi* and *Lantana Mutabilis*. I have seen them cultivated in hothouses and in most counties of England, but with miserable success: such being the case, has stimulated me to send you my method of their culture, which you will find to be very different from what you have seen practised.

As early as possible, in September you may take off a quantity of cuttings and insert them in sand and peat, under a bell glass: give them a little bottom, and they will be perfectly rooted by the first week in October, when they must be potted singly in small pots, using a mixture of equal parts, of leaf soil, peats and loams. As soon as the plants have attained six inches in length, pinch off the leading shoots in order to keep them dwarf; let them be kept in a cool greenhouse until the early part of April, when a bed must be prepared for their reception. I have found the following preparation to answer well:—

Whatever bed I choose upon, the whole of the soil is taken out of the depth of eighteen inches, and filled with equal parts of well decayed leaves, peat, and loam; "the latter being of a forcible texture." After being well mixed together, and allowed to settle for a few days, the plants are turned out alternately over the bed at two feet apart. The plants are trained prostrate over the bed, similar to the habit of *Verbena twediana*. Nothing can exceed in splendour a bed of these when in one mass of bloom. I had a bed treated in this manner last year, which was the admiration of all who saw it, and which was one mass of bloom from June to November. I find it necessary every season to prepare a stock of young plants for turning out the next spring, which are treated as already stated. I have found several other valuable exotics do equally as well as those above named, when treated in a similar manner, the particulars of which I intend sending you at an early opportunity."—GARDNER'S GAZETTE.

SEEDS OF DELPHINIUM BEING POISONOUS.—The seeds of *Delphinium staphisagaria* yield an alcaloid, called Delphinia, which exists in it in the state of a malate of Delphinia, and which is possessed of great virulence. It probably exists in the other species of the genus, not only in the seeds, but probably also in the leaves.

It is remarkable that insects do not prey upon leaves of any species of *Delphinium*, which may possibly be owing to the fine instinct with which they are endowed, indicating to them the presence of a principle which would be to them detrimental. The consequence of insects abstaining from these plants is, that the leaves are not disfigured by their ravages, but remain whole till they wither and fall off. This renders them desirable objects of cultivation; but they should be placed out of the reach of children, as the poisonous properties they possess, might cause fatal accidents. BOTANIST.

REFERENCE TO PLATE.

1. *Fuchsia fulgens*. This most splendid species has been introduced into this country by Mr. Lee, Nurseryman, Hamersmith, near London, and is unquestionably far the handsomest kind in the country. We could not give the foliage in its proper size, each full grown leaf is about five inches long and four broad, of a fine green above and purple beneath, having a noble appearance, and in this respect alone is an object of attraction. The flowers are produced at the ends of the shoots, we saw clusters of from eight to ten flowers, but we have been informed, that as many as from fifty to sixty have been grown in a cluster. It is a most desirable plant, and would be an ornament to every greenhouse, conservatory, or flower border. The plant is of

VOL. V.

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vigorous growth, and growing rapidly would soon make a most magnificent object.

2. *Tecoma jasminoides*. (Synonym *Bignonia jasminoides*.) This most beautiful flowering plant has bloomed in the collection of Messrs. Chandler, Vauxhall, London, where we saw it this Summer. It is a highly ornamental plant, for the conservatory or greenhouse, where grown as a climber or trained to cover a space, it would produce a beautiful effect. The plant is of quick growth when established, and in every account merits a place in every conservatory or greenhouse.

FLORICULTURAL CALENDAR FOR DECEMBER.

PLANT STOVE. Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, &c. required to bloom from January, should be brought in early in the present month, the plants should be placed at first in the coolest part of the house, never allow them to want water. Pots or boxes containing bulbous rooted flowering plants as Hyacinths, Narcissuses, Persian Irises, Crocuses, &c., should occasionally be introduced so as to have a succession of bloom. All stove plants will require occasionally syringing over the tops in order to wash off any accumulated dust from the foliage. Cactus plants that have been kept out of doors or in the greenhouse, should occasionally be brought into the stove for flowering.

GREENHOUSE. As much fire as will barely keep out frost will be necessary and for the purpose of drying up damp arising from foggy nights, or from watering; all possible air should be admitted in the day time, but mind to keep the plants from damage of frost. Chrysanthemus will require a very free supply of air, and a good supply of water; by the end of the month many will be going out of bloom, such should be cut down and, if any kind be scarce, the stalks may be cut in short lengths and be struck in heat, always cut the lower end of the cutting close under the joint. If greenhouse plants require watering, or syringing, over the tops, let it be done on the morning of a clear day when air can be admitted, and towards evening a gentle fire heat should be given.

FLOWER GARDEN.—Be careful to protect beds of what are technically called Florists Flowers, should severe weather occur. Calceolarias that were cut down and repotted last month will require attention, not to water too much or they will damp off, keep them in a cool and airy part of the greenhouse or pithouse. Auriculas and Polyanthus will require plenty of air in fine weather, and but little water (see page 25); the like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if anything are moulding or likely to damage, let the roots be dry if they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have free air, and be raised above the ground; if they are under a glass case, it will be much better than if exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undisturbed, reduce them to a desirable size by cutting them round with a sharp spade. When it is desirable to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week stocks, and mignonette, in pots for blooming early next spring to adorn a room or greenhouse, must not be overwatered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reed covers at the night will answer well. Tender Evergreens newly planted, would be benefitted by a little mulch of any kind being laid over their roots. During hard frosts if additional soil be required for flower beds, upon grass lawns, advantage should be taken to have it conveyed at that time, so that the turf be not injured by wheeling.

INDEX

TO THE PLANTS FIGURED IN VOL. V. 1837.

Facing page Reference.

✓ ✓ Adelaide d'Orleans, Rose	193	....	—
✓ ✓ Adolphus Ranunculus	169	....	192
✓ ✓ Agnes d'Castro, Dahlia	1	....	24
✓ ✓ Anagalis lilicina	193	....	—
✓ ✓ Bigonia venusta	49	....	72
✓ ✓ Calceolarias Seedlings, No. 1, 2, 3, 4, 5, 6, 7, 8, 49	49	....	72
✓ ✓ Cuphea silenoides	241	....	264
✓ ✓ Diadem, Ranunculus	169	....	192
✓ ✓ Duke of Manchester, Wood's Picotee	25	....	48
✓ ✓ Fuchsia Fulgens	(241)	....	297
✓ ✓ Gardoquia Hookeri	1	....	24
✓ ✓ Governor, Ranunculus	169	....	192
✓ ✓ Heartsease Seedlings, 1, 2, 3	148	....	168
✓ ✓ Heartsease ditto A, B, C, D, E	121	....	—
✓ ✓ Kennedia Marryatti	217	....	239
✓ ✓ Lobelia azurea	241	....	264
✓ ✓ Lobelia azurea grandiflora	217	....	239
✓ ✓ Lobelia propenqua	217	....	239
✓ ✓ Nuttalia Grandiflora Superba	241	....	264
✓ ✓ Penstemon gentiaoides	241	....	264
✓ ✓ Petunias, Seedlings, 1, 2, 3, 4, 5 and 6	121	....	—
✓ ✓ Sparaxis decorra	73	....	94
✓ ✓ Sparaxis Doubreeana	73	....	94
✓ ✓ Sparaxis formosa	73	....	94
✓ ✓ Sparaxis venustum	73	....	94
✓ ✓ Superba Pink, Wood's	25	....	48
✓ ✓ Tecoma jasminoides	(221)	....	298
✓ ✓ Triumphant, Pink, Ibbett's	25	....	48
✓ ✓ Verbena Tweediana	1	....	24
✓ ✓ Vicar of Wakefield, Dahlia	97	....	—
✓ ✓ Victoria I. Ranunculus	169	....	192

GENERAL INDEX.

	PAGE.
Acacia, on the greenhouse species of	36
A Clergyman, J. S. remarks by	69
A Clergyman's Daughter, Culture of Phlox Drummondii by	217
A Constant Reader, Query by	118
Acropera Lodigesii, noticed	113
A. D. on striking the Verbena Melindris by	145
Adolescens, Queries by	140
Adolphus Ranunculus, description of	192
A Foreman of a London Nursery, on raising Heaths from seeds by	124
" " remarks on the occasion by	38
Aggripina Picotee, description of	197
A Lady, Query by	211
Alpha, Query by	20
Alspice, Remarks on	71
Alstromerias, on the culture of	247
Amateur, Query by	118
Amicus Floribus, on the genus Lupinus by	104
Anagillis Phillipsii, Remarks on	236
" Morelli, notice of	113
An Admirer of Dahlias, answer by	92
An admirer of the Cabinet, on Heartsease by	20
An Amateur, culture of Roses by	135
" Gardener, on propagating Balsams by	133
" of the Metropolis, on Campanulas by	70
An Ardent Amateur, culture of the tree Peony by	146
An Enquirer, on impregnating Calceolarias, &c. by	227
A Lover of Herbaceous Plants, Query by	294
A Subscriber, Query by	118
A Three Year's Practitioner, Orchideæ by	35
A Practical Heath Grower, on Cape Heaths by	6
A New Subscriber, Query by	66
An Old Florist, on raising Carnations from seed	227
" Subscriber, on Bins for holding Soils, &c. by	156
" " Query by.	66
" " List, &c. of Plants, by	246
Anometheca cruenta, on raising from seeds	20
An operative, on striking Cuttings in water	173
Ants, Remarks on destroying	94
April, Floricultural Calendar for	96
Appleby Mr Thomas, on (Geraniums), Pelargoniums	8
" " on the culture of Pelargoniums, by	53
A Practical Gardener, Culture of Pinks by	31
" " in Staffordshire, on potting Greenhouse Plants by	38
Aquatics, on Tender	49
Aroma of Flowers, on the	68
Auricula, on the culture of	30, 47, 101
" on Soil proper for	104
A Young Amateur, on fumigating Plants in Hothouses by	123
Azalea Seymouri, noticed	187
Baeria chrysostama, noticed	210
Balsams, on propagating by cuttings	133
" on the Culture of	171

	PAGE
<i>Banksia accidentalis</i> , noticed	17
Barratt, Mr. William, on the culture of Fuchsias by	12
" " Answer by	140
" " Description of <i>Mimulus Cardinalis coccinea</i> by	202
<i>Begonia platinifolia</i> , noticed	233
" <i>monoptera</i> , ditto	113
" <i>octopetala</i> , ditto	89
" <i>insignis</i> , noticed	293
<i>Begonia Venusta</i> , Reference to Plate	72
Bloomwell, Dialogue between, &c.	221, 268
<i>Blumenbachia multiflora</i> , noticed	235
<i>Bolbophyllum coccineum</i> , noticed	233
" <i>saltatorium</i> ditto	187
" <i>barbigerum</i> , ditto	89
Bone manure, on	167
Botanical Society, Meeting of	70
Botany, Science of	164
" " Reviewed	116, 181
Botanist, Remarks by	216
Boyce, Mr. William, on the culture of Herbaceous plants	147
<i>Brassavola cordata</i> , noticed	17
<i>Brodiaë grandiflora</i> , noticed	235
<i>Broughtonia coccinea</i> , ditto	17
Browne, Mr. James, List of plants by	50, 84
<i>Brugmansia aurea</i> , Remarks on	144
Briant, Mr. William, on the Hyacinth	106
Bulbous Roots, to flower in three weeks	45
<i>Burlingtonia candida</i> , notice of	41
Cactus, on the culture of the	21
<i>Calochortus</i> , Remarks on	71
<i>Calceolarias</i> , Reference to plate	236
" on impregnating	227
<i>Calliprora lutea</i> , noticed	118,
<i>Camellia</i> , Query on the	140
" Lists of new kinds of	172
" Culture of the	129
" Descriptive list of	267
Campanulas, Remarks on	70
<i>Catalpa intermedia</i> . var. <i>pallida</i> . noticed	17
Cape Heaths, on propagating by seeds	124
" Bulbs, Query on growing	67
Carnations, List and description of	111, 129, 197
" and Picotees, on raising from seed	227
C. B. B. On the culture of the <i>Nelumbium</i>	110
" Answer by	49
" on Tender Aquatics by	67
" on the culture of <i>Cylamens</i> by	58
C. C. B., on heating a pit by	73
<i>Cereus serpentinus</i> , noticed	113
" <i>Akermania</i> , ditto	260
<i>Cereopegia stapeleformis</i> ditto	113
Champion Picotee, description of	198
Chinese Gardening on	24
" Primrose, Query on the double	66
" Roses, on the heights of the sweet scented	167
<i>Chryseis Compacta</i> , noticed	113
Charles Mr. I., on blooming the Hyacinth by	45
<i>Chysis, aurea</i> , noticed	89
<i>Chrysostoma tripteris</i> , ditto	185

	Page
Chorizema, Remarks, on ditto	263
Clair, Mr. W. H. St., on propagation of Greenhouse plants by	199
Clarkia, Query on the double	66, 92
" Answer on ditto	118, 140
" gaurioides, noticed	114
" rhomboidea ditto	233
Clark Mr. J. P., Remarks by	71
Clematis Florida var. Siebaldi, noticed	233
" cœrulea, noticed	137
Clericus, Culture of the Camillea by	129
" Remarks by	167
" on Greenhouse plants by	144
Clianthus puniceus, on the	188
Colchicum. &c. on the	189
Cook, Mr. J. C. on the Pansey by	219
Comet Picotee, Description of	199
Conductor, Query by	66
" ditto	66
Conquering Hero Carnation, description of	154
Convolvulus diversifolia, noticed	291
Correa Milnerii, Remarks on	263
Coreopsis longipes, noticed	187
Cottage Farmer, Remarks by	296
Cowanea plicata, noticed	260
Cratægus coccinea, ditto	137
" Flava, ditto	189
" Glandulosa, ditto	17
" Flava var. Lobata, ditto	64
" Oxycanthus var. Oliverian, noticed	64
Creepers, on ornamental	20
Crinum, on the management of the	11
Cyclamens, on the culture of	20, 58
Cypripedium purpuratum, noticed	260
Cytisus Æolicus, noticed.	137
Dahlia, on the	20, 167
" on the culture of the	105
" a List of fifty sorts of the	67, 69, 72
" on obtaining large flowers of the	216
" on raising seedlings	150
" on the colours of the	236
" on var. Sulphurea elegans	45
" Grower, Query by	294
Daniel Professor, on the climate of Hothouses by	255
Datura guayaquilensis, noticed	114
Daviesia ulicina, noticed	90
December, Reference to Plate	297
" Calendar of	298
Defiance Carnation, description of	112
Delphinium chinensis var. albiflora, Query on	211
" chinensis var. albiflora, Answer on	262
" Barlowi, noticed	114
" intermedium var. pallidum, noticed	209
" montanum, noticed	96
" tenuissimum ditto	234
" vimineum	234
" grandiflora, on the	152
Deutzia scabra, on the	188
Diadem Ranunculus, noticed	192
Dipodium punctatum, ditto	234

	PAGE
<i>Dioscorea tilliformis</i> , ditto	18
Duchess of Devonshire, Carnation, noticed	112
<i>Duranta Elesii</i> , Remarks on	262
Earl Grey Carnation, Description of	154
Earth, a substitute for Bog	119
Earwigs, to destroy	67
<i>Echinocactus sessiliflorus</i> , noticed	114
<i>Echeveria racemosa</i> noticed	137
<i>Epidendrum chloroleusum</i> , noticed	90
" <i>diffusum</i> , noticed	114
" <i>coriaceum</i> , ditto	209
" <i>nocturnum</i> , ditto	185
" <i>crassifolium</i> , ditto	41
<i>Epigea repens</i> var. <i>rubiconda</i> , ditto	137
Epiphytes. Treatment of Orchideæ by	121
<i>Ericas</i> , Query on the Management of	44
" on propagating from seeds	12
Errington Mr. R., culture of the Neapolitan violet	25
<i>Erythrolena conspicua</i> , culture of the	29
" <i>laurifolia</i> , culture of the	30
<i>Eschscholtzia</i> . Remarks by	22
<i>Eucardium concinnum</i> , noticed	185, 209
<i>Eulophia macrastachya</i> , ditto	209
<i>Euphorbia fulgens</i> , ditto	90
<i>Euphorbia Jacquiniflora</i> , ditto	68
<i>Eutoca visiosa</i> , ditto	137
" <i>wrangolina</i> , ditto	185
Evergreen Shrubs, on planting of	230, 265
" on propagating of	201
Ferns, a list of Foreign	73
Flagrans <i>Pelargoniums</i> , Remarks on	57
Flora's Garland Carnation, description of	129
Flora, Query by	20
Flower Garden, Remarks on the	175
" Review of the	175
Flowers, on producing different colours of	174
" on giving effect to the colour of	46
" Query on a list of one hundred	66
" seeds, a list of the best	122
" a chapter of	215
" on the colours of	227
Food of Plants, on the	50
Frogs, Query on	92
Frost Mr. Jack, on restoring frost affected plants	4
<i>Frittilaria</i> , Query on the	140
<i>Fraxinellas</i> , on the	59
F. S. Query by	118
<i>Fuchsia</i> , on the culture of	12
" <i>Groomiana</i> , noticed	144
" <i>fulgens</i> , Remarks on	263
Furnace. Query on the heat of a	67
Fyffe Mr. John, on the culture of heaths	169
<i>Gallardia picta</i> , on the	188
" <i>bicolor</i> var. <i>Drummondii</i> , noticed	64
Gaines Mr. N. Remarks by	95
<i>Galphimia glauca</i> , noticed	133
<i>Gardenia pancea</i> , noticed	161
<i>Gardoquia Hookeria</i> , ditto	24
<i>Genista monosperma</i> , ditto	18

	PAGE
Gerania, on Pelargoniums by	151
Geraniums, Remarks on	94
" on preserving through the winter	162
" on the culture of	8
Gesneria enlongata, noticed	202
" letereti, ditto	114, 260
" Sellarii, ditto	90
" Lindleii, ditto	260
" Sellarii, Remarks on the	263
" sceptrum, var. ignea	161
G. H. S. Treatment of the Erithryna laurifolia, by	30
Gloria Florum Carnation, description of the	155
Governor Ranunculus, noticed	192
G. R., on the Auricula by	101
Grandissima Pelargonium, on the	57
Grabowskii Coerhavifolia, noticed	261
Green Fly, on destroying the	214
Greenhouse, Plan of a	1
" Plants, on the propagation of	199
" Plants, on re-potting	36
Greenhouse, on fumigating	123
Hall, Mr. J., Culture of Mesembryanthemus, by	87
Hamilton, Mr. W. P., Query by	44
Hayward, Esq. Joseph, on Theory and Practice by	50
" " on the food of Plants by	50
Heartsease, on Superb	93
" on	20
" culture of the	52, 219
" Query on	66
" Query on the best season for sowing	211
" History of the	163
" noticed	168
Hebranthus Andersoni, Texamus, noticed	284
Heaths, on the culture of	269
" on the propagation of Cape	6
Heracleum asperum noticed	144
Heuchera Cylindriacæ, ditto	44
Hippeastrum breviflorum, ditto	64
" ambiguum var. longiflorum, noticed	41
Hosackia stolonifera, noticed	234
Hot Water, on heating by	45, 67
Hothouses, on the climate of	255, 271
Hours of the day, List of plants, indicating the	84
Hayacarnosa, culture of the	12, 37
Humarii Pelargonium, on the	57
" on blooming in Water Glasses	45
Ibbet, Mr. Thomas, culture of the Pink by	78
Insects, on the destruction of	262
Impatiens scapiflora. Remark on	209
Ipomea and Convolvulus, description of genera	216
Ipomopsis Elegans, Query on the	44, 91
Ismene Amanaceas, noticed	42
Ispagan Baxterii, noticed	18
Ixias, on the culture of	266
Jacobus, Remarks by	67
Jacques's Georgiana Carnation, Description of	156
J. F. Query by	118
J. G. Query by	44

J. R. List of Foreign Ferns by	173
J. W. D. Remarks by	167
Kalmia, Query by	92, 236
" Remarks by	69
Kamel G. J., List of Camellias by	172
Kennedia Maryattii, Reference to plate	240
Kernan, Mr. John, Query by	140
" Answer by	118, 140
" Letter by, on the decease of Joseph Sabine Esq.	94
King Mr. I., Query by	64
Lachenalia pallida, noticed	115
" glaucina noticed	63
Lady bird, on the	143
Lancashire Lass Carnation, Description of	55
Larkspur, on Delphinium grandiflorum, by	152
Loelia anceps, noticed	115
Lililium peregrinum, noticed	42
Limanthus Douglasii, noticed	64, 115
Lilium astrosanguineum, Remarks on	263
Lilly, culture of the	40
Linum monogynum, noticed	161
Lisochilus speciosus, noticed	90
Lobelia azurea, Reference to Plate	284
" cardinalis var. Millerii, noticed	64
" polyphylla, noticed	65
" Canavalesii, ditto.	261
" Siphilitia, ditto	261
" cœrulea, Reference to plate	
" propinqua, ditto	239
" polyphylla, noticed	65
Lolotte, Query by	92
Loudon's Mr. G. C. Suburban Gardener Reviewed	257, 285
Lupinus, on the Genus	104
" versicolor, noticed	235
Mackenzie, Mr. C. Remarks by	237
Magnificent Carnation, Description of	155
Major Mr. Joshua, on pruning and thinning Plantations, &c. by	241
Malva Munroana, noticed	18
Maxillaria Steeli, ditto	261
Mayo Herbert, on human Physiology	144
Medicus, Query by	44
Megeseliolum maximum, noticed	161
Menonvillea filifolia, noticed	65
Mesembryanthemums, Culture of in the open air	87
Mimosa prostrata, on the	167, 188
" sesitiva, noticed	144
Mignonette, on the tree	44
Mimulus cardinalis coccinea, Description of &c.	202
" Claptonia, on the	188
" Hodsoni, on the	188
" Harrisonia, noticed	291
Monachanthus myanthi, noticed	115
Moonraker Picotee, description of	198
Morna nitida, noticed	91
Mountjoy, Mr. R. S. answer by	93
Muscaria commutatum, noticed	65
Monachanthus Discolor, var. Veridiflorens, noticed	291
Miltonia Spectabilis, noticed	292
Narcissus minor pumila, noticed	167
Nectaroscordum siculum, noticed	18

	Page
Neapolitan Violet, culture of the	25
Nelumbium, on culture of	110
Nemophila insignis major, remarks on	167
" automaria, noticed	91
Nepenthus distillatoria, noticed	65
Nerium splendens, remarks on	71
Neville, Mr. C., Query by	20
Nuttallia grandiflora, remarks on	263
" " superba, reference to plate	264
Oenothera fruticosa, var. ambigua, noticed	42
Old Subscriber, query by	167
Oncidium Cebollete, noticed	115
" crispum, noticed	42
" cunatum, noticed	65
Orange, on striking cuttings of the	201
Orchideæ, on the	22
" remarks on	67
" on culture of	85, 121
Of Mexico and Guatemala	289
Onithogalum conicum, noticed	18
Oncidium Luridum, noticed	291
Oxalis Alba, noticed	293
Palm Tree, review of	288
Pansey, (see Heartsease)	
Passion Flower, on the	68, 118,
Pavettia Caffra, noticed	186
Paul Pry, (Wakefield's) Carnation, description of	112
Pearce Mr. G., on raising seedling Dahlias	150
Pedro, query by	66, 262
Pelargonium, culture of the	53
" on the	152
" query by	92
Pensee, a list of Carnations, &c. by	111, 197
" culture of the Pansey by	52
Pentstemon breviflorus, noticed	115
" gentianoides, noticed	264
" Murryanus, noticed	236
Pereskia aculata	65
Peristeria cerina, noticed	161
Petunias, Remarks on	168
Petunia violacea hybrida, noticed	91
Phalangium pomaderrianum, noticed	162
Philodendron crassinervum, noticed	162
Philo Flos, Query by	211
Phlomis armeniaca, noticed	18
Phycella brevituba, noticed	91
Pink, Bow's Suwarrow, Query on	118
" Culture of the	13, 31, 78
" On piping the	144
" Remarks on the	119
Pit, apparatus for heating a	73
Plants, List of indicating the hours of the day	84
" On striking cuttings of, in water	173
" Restoring, from frost	4
" List of climbing	59
" Query on a List of Bulbous	211
" Culture of Herbaceous	147
" Propagation of	165
" Lists and proportion of Composts, &c. for	266
" on Watering	222

	PAGE
Plants on Greenhouse	134
" Query on Rock	44
" on drying	45
" a List of Perennial	97
" suited for a Rock Work	177
Plant Mr. John, culture of <i>Primula sinensis</i> by	20
Plant Houses, &c. on fumigating	123
Plant Stove, Plan of a	1
<i>Platystemon californicus</i> , noticed	186, 234
<i>Pleurothallis saucocephalis</i> , ditto	210
Plumsted Mr. C. on destroying the Wire Worm by	28
<i>Podolobium Staurophyllum</i> , noticed	193
Pomona, on grafting the Rose by	159
Poplar, Query on the Canadian	118
" Answer on the Canadian	140
<i>Potentilla Thomasi</i> , noticed	142
Practical Gardener, on the culture of Pinks by a	13
<i>Prescottia colorans</i> , noticed	18
President Carnation, Description of	198
<i>Primula Sinensis</i> , Culture of the	29, 45
" Scotica, on propagating Evergreens by	201
" Treatment of <i>Haya carnosa</i> , by	37
Prince Von Oranium Picotee, description of	198
<i>Psoralea orbicularis</i> , noticed	210
Rainbow Carnation, (Cartwright's) description of	112
<i>Rehmannia chinensis</i> , noticed	186
<i>Rhexia Mariana</i> , noticed	210
<i>Rhododendron</i> , on pruning the	236
" arboreum cinnamomeum, noticed	235
" phænniceum, noticed	186
Rosa, Query by	66
<i>Rosa Hardii</i> , Query on the	66
<i>Rosa Indica</i> var. <i>Blairii</i> ,	293
Rose, on the culture of the tree	193
" on grafting the tree	107, 135
" on the culture of the	135
" Remarks on the	119
Roses, a list and temple of	52
" on forcing	27
Rosalie de Rhoan Picotees, description of	198
R. T. W. T. a List of perennial plants by	97
<i>Rytidophyllum auriculatum</i> , noticed	91
Sabine, Joseph, Esq. Letter on the decease of	94
Salt Hill, Dahlia Exhibition	191
Sansome Mr. H. Remarks on the genus <i>Crinum</i> by	11
<i>Scutellaria Alpina</i> var. <i>Sanguinea</i> , noticed	262
Sensative Plant, on the	237
Scarlet Thistle, on the <i>Erythrolina conspicua</i> , by	29
<i>Searsanthus teretifolius</i> , noticed	162
<i>Schizopetalon Walkeri</i> , noticed	186
Scott, Mr. W. on culture of <i>Alstræmerias</i> by	247
Serutator, culture of the Balsam by	171
Shepherd Mr. I., on the culture of the <i>Auricula</i> by	30
Shrubs, Query on	66
<i>Silene chloræfolia</i> , noticed	235
<i>Sisypinchium grandiflorum</i> , noticed	187
Slugs, to destroy	67
Smith, S. W. E. List and Temple of Roses by	52
" on the culture of <i>Koya carnosa</i> by	12
Smith I. A. Remarks by	68

	PAGE
Snails, to destroy	119
Society, London Horticultural Meeting	141, 190, 238,
" Metropolitan, ditto	168
" Sheffield, ditto	214
" Thuralston, ditto	213
Soils, on a Binge for holding	156
Solanum Herbertii, on the	188
Sparaxis Stellarias, noticed	162
" Reference to plate of	95
Spartium acutifolium, noticed	187
Spiranthus bracteosa, ditto	65
Spiranthus japonica. Remarks on	236
S. R. P. on the culture of the Dahlia by	105
Stackhousia monogynia, noticed	19
Stenactis speciosa, Query on	262
Stranvæscia glaucescens, noticed	162
Subscriber, on a plan for a Greenhouse by	1
Suburban Gardener, &c. Reviewed	257, 285
S. W. Query by	262
Symphoricarpos, noticed montanus, noticed	163
Timothy, Query by	167
Tradescantia crassifolia, noticed	45
Tree Pæony, culture of the	146
Trees, on pruning Timber	231
" on the age of	45
" On pruning and thinning	241, 249
Trichocentrum fuseum, noticed	16
Tricondicum obtusum, ditto	45
Tritelia uniflora, noticed	45
Tropæolum brachycerus, noticed	65
T. T. B. on the tree Mignonette by	44
Tulbagia Ludvigiana, noticed	45
" violalacea, ditto	21
Tulips, Exhibition of	45
Tweedia cerulea, noticed	22
Venus Carnation, description of	154
Verbena Aubletia var. Drummondii, noticed	45
" Abbletia var. Drummondii Vilaeriana, ditto	263
" melindris, on siriking the	145
" Tweediana, Reference to plate	24
" Lambertia, noticed.	19
Victory, Pelargoniums. Remarks on	57
Victoria Ranunculus, Reference to plate	192
Water, Remarks on	203
W. C. Remark by	15
W. G. J. on Heracleum asperum	144
W. C. R. List of Flower seeds by	122
Whale. Mr. William, on striking the Orange by	201
William the Fourth Carnation, description of	155
Willis Mr. J. R. on forcing Roses by	27
Wire Worm, on destroying the	21, 28
Wiganeira Caracasana, noticed	186
Wistaria Sinensis, on	118
Witsenia Ludvigiana, noticed	45
Wood Lice, on destroying	67
W. W. Query by	236
Yeatmaniana, pelargonium noticed	57
Zygopetalon cochleare, noticed	210

THE
FLORICULTURAL
CABINET,

AND
FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1838.

VOLUME VI.

CONDUCTED BY MR. JOSEPH HARRISON,

NURSERYMAN,

DOWNHAM NURSERY,

NORFOLK.

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bers many queries will be found requiring answers. We are fully assured many of our Readers have it in their power to give useful and practical replies, and we do most respectfully ask their aid. It is our intention to commence answers to all past queries in every former Number that have not had answers, and such to be embodied in every future Number.

A monthly notice of all new Works on Gardening and Reviews, and remarks on every thing published in them, or in monthly and quarterly publications on Floriculture, will be given every month.

We again beg to record our grateful acknowledgments to our Friends who have so kindly contributed the valuable and interesting information, which we have had the pleasure to insert in the present Volume. We most respectfully solicit their continued co-operation. Some persons are deterred from communicating information, because the subject they are so familiar with does not appear of the interest it has in reality. Whatever is an improvement, however small, we shall be glad to be entrusted with them, and we will present them in a form that will be creditable to the author as well as ourselves, and thus contribute to make the Cabinet still more useful and valuable in proportion.

Downham, November 20th, 1838.



Clontonia pulchella

One third of the usual size.

Glycyne Harrisonia

THE
FLORICULTURAL CABINET,

JANUARY 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF THE DAHLIA.

BY MR. ARTHUR BARBER, GARDENER TO THE HON. MAJOR LEGGE, BLACK-
HEATH, KENT.

THE very great respect I have for the manner in which your extensive Cabinet is conducted, has prevailed upon me to submit a course of treatment with regard to the culture of the above-named plant, (the Dahlia); by doing which, perhaps, it may not be amiss to its many readers, first to elucidate a little of its botanical name, and then to treat of its culture.

In regard to its botanical name, we find, on having reference to works which have been conducted by some of our most distinguished cultivators, that it was given in honor of Dahl, a Swedish botanist, but as it appeared that this name had previously been given to a very different plant, botanists changed the name to Georgina, in honor of Lady Holland, who, in 1804 reintroduced the plant after it had been considered lost for upwards of fifteen years; however the first name has become too general to be displaced, and a Mr. Don, a reputed botanist, takes upon himself to say it is correct.

In reference to its culture, I trust the following observations will not be found objectionable, as they have been, I do assure you, made with great assiduity.

VOL. VI. No. 59,

About the middle of the month of March I consider is the best time to begin propagating the Dahlia; take your roots, otherwise tubers, and insert them in pots according to the size of your tubers, so that they have about an inch and a half or two inches clear around them; then take some fine light mould, (taking care to have an inch or two of potsherds at the bottom of your pots, to give good drainage) say one half leaf mould, and the rest kitchen garden earth, with a small portion of sand added to it, incorporate them well together and fill your pots (after having placed your tubers in them) taking care that the crowns of the tubers are above the level of the soil, and place them in a moderate hotbed till they have issued shoots two or three inches in length. (If a whole frame be used, I would recommend about three inches of sandy soil to be sifted over the dung, on which the tubers are to be laid, and covered with similar soil, also taking care to leave the crown of the tuber above the level of the soil, and also that the heat be not too violent, and when watered, to sprinkle them with warm water.) At this time have in readiness some pots eight inches in diameter, and an equal quantity four inches in diameter, so as when the one is placed in the other, there shall be two inches distance or thereabouts from circumference to circumference. After you have got your pots ready, take care to have plenty of potsherds to lay at the bottom, two inches of them will not be too many, as it is very requisite, and a matter of great importance, to carry off that superfluity of moisture which is occasioned by the too frequent watering; after having put your potsherds in, proceed to put in your compost, let it be such as will not retain too much wet, and on the contrary, such, as will imbibe a sufficiency of moisture.

I have found the following compost to be of great utility in the propagation of the cuttings, namely, one half leaf mould, and the remainder kitchen garden earth and sandy loam, in the proportion of two of the former to one of the latter. After having placed corks in the bottom of the smaller pots, so as to make them water tight, put your compost into the larger pot, until the edge or rim of the smaller pot when placed in it, shall become level with that of the larger pot: after having done this, prepare yourself with a sharp knife, and detach the shoots that are fit, that is when they have attained the desired length, taking care to detach them under a joint, or you may take them off by your hand, tak-

ing care to leave as much of the woody fibres at the joint as possible, otherwise the part is apt to rot off, and insert them around the space between the pots, then place them again in the hotbed. You may keep a little water in the inner pot, which is very useful and requisite, for the pot being in a moderate degree porous, it distributes a degree of moisture to the cuttings, which is so very essential to their striking, and the water being of the same temperature as the bed, it may occasionally be used in watering them, and thereby prevent those fatal consequences which are apt to destroy cuttings when watered with cold water; care must be taken not to give the cuttings too much water, as it is apt to drive the plants into leaf and height, and consequently to retard and even diminish the flowering. If water, is given let it be to the roots only, when the sun is shining upon the plants, at other times it may be given over the leaves.

I make it a rule not to plant out Dahlias in the open ground before the end of May, or early in June, so as to escape injury from frost. By this period the cuttings are generally well rooted. The soil to grow them in successfully ought to be a sandy loam. If the natural soil of the situation is not of this kind, a compost should be prepared, I recommend the following. Take about one-fourth well rotted dung, one half light sandy loam, and the remaining one-fourth, peat or bog-earth with a small quantity of leaf mould and road grit added. These ingredients must be well blended together and dug in the soil, for some time previous to your planting them in it. After your soil is prepared, the holes should be made ready to receive the plants, which should be about three feet from each other. In separating the plants, turn the pots upside down, and give it a gentle tap on the edge of your frame, or on any other convenient place, so as to loosen them. Care must be that the fibrous roots are not injured by separating. Then place them singly in the prepared holes, pressing the earth gently to them, and draw a small circle around each, so that when you have finished planting and begin to water, the water must be allowed to settle moderately around them. Having your stakes ready varying in length according to the height of the plants, allowing two feet for insertion in the ground, place them about two inches from the stem of the young plant, if this is not attended to now, it will hereafter be somewhat difficult, owing

to the roots increasing and the insertion of the stakes at this period, would injure them. As the plants advance in height, take care that they have timely support, by tying the stems to the stakes with bass.

When the flower buds begin to appear, you must not let your plants lack moisture, if this is not attended to, your flowers will be very weak; indeed, from the first planting them out, they ought not to lack water. To have fine flowers you ought to divest the branches of the small side shoots, also of buds which appear to cluster, leaving no more than one bud on each stem; this is practised by Florists, whose flowers are for competition.

About this time you will begin to find yourself very much troubled with those unwelcome guests, the earwigs, by committing extensive ravages among the flower buds, indeed, I know of no other tribe of plants which they seem to crave after so much as the Dahlia, and if great care is not taken, by having recourse to some means or other to extirpate them, your prospects as far as regards their flowering, will be entirely blighted; for there cannot be a petal which comes within their reach, but evident signs of their ravages manifest themselves. I have had recourse to various methods, but found none so efficacious in diminishing them as the following. (Moreover, be it observed, that it is a practice with many to mulch the ground with stable litter, so as to create a continual moisture around the plants; this mulching I have found to be an allurement for the insects, for they will conceal themselves even in the pieces of straw, which to find, will be like looking for a "needle in a bottle of hay." If mulching be adopted, let it be that of cow dung, which will answer your expectations in every sense of the word.) 1st, Pots placed on your stakes, with a little dry moss or tow in them, and looked into early in the morning. 2dly, Tow placed round the flower stalks, the insects not liking to ensnare themselves in it; and, 3dly, Bean stalks placed by a piece of string, on the stems or stalks; also pieces of cane soaked in water that had previously some sugar dissolved in it, the earwigs being very partial to things that possess saccharine matter and a dark recess. With regard to taking up your tubers, which is a very important thing, let it not be done too early lest their not being sufficiently ripe, will cause them to shrivel or rot and die. Great care must be taken of the lower end of the stem where it joins the tuber,

and where the eyes are situated, from their chance of being nipped by early frost in October and November; to prevent this, about the end of September or beginning of October, get some dry straw, pease haulm, or dry stable litter (the earwigs being nearly extirpated about this time) and place it around the lower part of the stem. When taken up, they must be gradually dried before they are permanently put away; in doing this, take care to turn them so as all parts shall receive a portion of air, you may then place them in boxes, filled with sand or ashes, leaving the crowns uncovered, as though they were planted. Before putting them away, of course it will be requisite to label them, to prevent confusion when planting them in the spring.

I hope these preliminary remarks will be found to meet the approbation of those who may scan them in your truly useful Cabinet.

Nov. 4th.

A. B.

ARTICLE II.

DIRECTIONS FOR PRESERVING PLANTS IN FOREIGN COUNTRIES FOR A HERBARIUM.

BY J. B.

THIS is a much simpler process than is generally imagined by those unpractised in it, and travellers have been often deterred from collecting specimens by the time and trouble required for preparing them in the way that has by many been recommended.

The chief circumstances to be attended to are, to preserve specimens of plants in such a manner that the moisture may be quickly absorbed, the colours as much as possible preserved, and such a degree of pressure given to them, as that they may not curl up in the time of drying.

For this purpose let a quantity of separate sheets of paper be obtained of a folio size. Common brown paper, upon the whole is the best, except the very delicate kinds, which require paper of a smoother and somewhat more absorbent texture. Blotting paper, however, especially in warmer climates, would absorb the moisture too rapidly, and by repeated damping and drying, would soon be rendered useless. Two boards should be provided, one for the top and the other for the bottom of the masses of papers.

For pressure at home, or when stationary for any length of time in a given spot, nothing serves better than a weight of any kind (a folio book, a large stone, &c.) put upon the topmost board; the great advantage of this is, that the weight follows the shrinking of the plants beneath.

Whilst travelling, three leathern straps with buckles should be procured, two to bind the boards transversely, and one longitudinally. It will be further desirable to have a number of pieces of pasteboard of the same size as the paper, to separate different portions of the collection, either such as are in different states of dryness, or such as are by their hard woody nature might otherwise press upon and injure the more delicate kinds. Thus provided, gather your specimens; if the plants be small, foot and stem; if large, cut off branches of a foot, or a foot and a half long selecting always such as are in flower, and others in a more or less advanced state of fruit.

Place them side by side, but never one upon another on the same sheet; and lay upon them one, two, or three sheets, according to the thickness of the plants, or their more or less succulent nature; and so on, layer after layer of paper and specimens, subjecting them to pressure.

As soon as you find the paper has absorbed a considerable portion of the moisture, (which will be according to the more or less succulent nature of the specimens, and the heat or dryness of the climate or season) remove the plants into fresh papers, and let the old papers be dried for use again, either in the open air, or sun, or in a heated room, or before the fire.

As to the spreading out of the leaves or flowers with small weights, penny pieces, &c. it is quite needless, the leaves and flowers are best displayed by nature in the state in which you gather them, and they will require little or no assistance with the hand, when laid out upon papers, to appear to the best advantage, especially if put on carefully when fresh gathered.

If the specimens cannot be laid down immediately on being gathered, they should be preserved in a tin box, or failing that, in a rush basket, where they will keep for a day or two if the atmosphere be not very much heated.

Some very succulent plants, such as Cacti, Semperviva, Seda, Orchideous plants which grow on trees, &c. require to have their specimens, plunged in boiling water for a few seconds before

they are pressed to destroy life, and thus accelerate the process of drying.

Plants with very fine, but rigid leaves as the Fir tribe and the heaths, and some with compound winged leaves, to prevent their leaves falling off, or their parts separating, may either be treated in the same manner, or dried in very hot paper, or by means of a hot iron.

In many cases, especially in warm climates, the traveller will find the process accelerated by exposing the parcel (hung up and properly secured) to the open air when the weather is favourable, and the circulation of air through it will be promoted if the sheets on which the specimens are laid be placed alternately back and edge. In tropical countries he will find it necessary to shift his specimens, at least once a day, and by changing them into hot paper, and crowding such specimens as are dry, he will be enabled to form a considerable collection in small compass, and in a very short time. Four or five shiftings will generally be sufficient to complete the process, which is ascertained by the stiffness of the stems and leaves, and by the specimens not shrinking when removed. They should then be placed between dry papers, and formed into parcels of moderate thickness, and either packed in boxes, or well secured as parcels covered with oil-cloth.

Palms having their fructification and leaves very large, can hardly be subjected to pressure; a few flowers should be pressed, and the whole cluster of flowers and fruit, as well as a leaf, may be simply dried in the air, and afterwards packed in boxes for transportation.

The greater number of Cryptogamic plants may be dried in the common way, mosses that grow in tufts, being separated by the hand. But both mosses and lichens, as they can at any future time be expanded by damping, may be dried by the traveller without pressure and put up either, each species separately or several together, in small canvas or paper bags, carefully marking the place of growth and the date when gathered.

If the fruits of plants are of a small size so as to be preserved in a herbarium, they should be gathered with the leaves and branches, as are the flowers; if of a large size they should be kept separate. Dry fruits demand on care, except that those which split into valves, should be tied round with a little pack thread. Pulps and fruits are only to be preserved in spirits, or

in pyroligneous acid, diluted in the proportion of eight parts of water to one of the concentrated acid: In all cases the separate fruits whether dried or preserved in a fluid, should have a number attached to them, referring to the flowering specimen of the plant. Seeds, whether for examination, or intended to be sown, should be gathered perfectly ripe, be put in brown paper bags, and kept dry in a box.

With the specimens of the fruits and seeds, there should be slips of paper, on which are to be written the uses, native name, and general appearance of the plants, whether herbaceous, a shrub, or tree, its sensible qualities, and the colour and form of the flowers; its situation, if dry, or damp, the nature of the soil, the elevation above the level of the sea, and the date when gathered.

As soon as a sufficient number of specimens are collected, no time should be lost in transporting them to their place of destination, since in warm climates especially they are liable to the attacks of insects. These attacks, which are often completely destructive of the specimens, may in many cases be prevented by pitching the boxes, and by putting in them, or in each parcel, cotton dipped in petroleum, spirits of turpentine, or small pieces of camphor, and the captain of the vessel should be particularly requested to keep them in a dry or airy part of the ship.

Specimens of the woods of from six to eight inches in length, the entire round of the trunk or branch of small, and segments from centre to circumference of the larger kinds, in both cases, with the bark, should also be preserved, not only of the more remarkable trees, but also of the woody climbers, which often exhibit peculiarities of structure highly interesting to the botanist. When specimens of woods are preserved, they should be marked with numbers, corresponding with the flowering branches of the tree in the collection of specimens; and when flowers cannot be obtained, a small branch with leaves or fruits should always be taken.

Gums, resins, and other remarkable products should also be collected, their uses, if known, noted, and reference made by numbers to the plants they belong to.

Useful and ornamental plants would of course form the most important part of such collections; but even the weeds of foreign and little known countries, the grasses ferns, mosses, lichens,

and sea weeds will prove extremely valuable to the scientific botanist.

London, Nov. 1837

J. B.

ARTICLE III.

SOME REMARKS UPON MR. MAJOR'S PAPER, Vol. V. p. 247-8.

BY JOHN ADEY REPTON, ESQ. OF SPRINGFIELD.

MR. JOSHUA MAJORS's remarks on the pruning, thinning, &c. of trees in plantations are very just, and well deserving of notice, as is the choice of trees that are likely to remain where planted, and his recommendation to cut down from time to time such trees that are beginning to encroach upon each other.

In thinning out it is always adviseable to preserve the outside trees of the woods or plantations, (which are generally the best) but more particularly to avoid taking away those trees that are most exposed to the cold winds, as they afford shelter to the inner trees.

It is difficult, I believe, to persuade nine out of ten persons to cut down an old tree, which like an old friend, in spite of all its deformities, are frequently cherished by the proprietor, but a man of considerable taste, or one who has a painter's eye, can have but little hesitation in condemning a deformed tree, and particularly when it happens to hide a fine group, or a distant prospect.

It is a vulgar opinion of country gardener's to say, that "if you cut down a tree, you can never put it up again," when the tree itself would be better away.

Mr. Major has strongly objected to the Italian black poplar, and the larch, as tending to overpower and injure the effect of the other trees in the woods. But the larch mixed with others I consider a handsome tree, and has a beautiful autumnal tint, but when too tall, it may be taken away if it should interfere with the general scenery. The great variety of the spruce firs, are very much admired when in a healthy state, and not too much crowded with other trees, they require (whether planted in groups, or as single trees) plenty of toe-room, and when mixed with other evergreen plants, are very desirable near a mansion during the winter months.

Mr. Major is decidedly against the Italian black Poplar, and

against other Poplars, to which I will add the Lombardy, that is, the Turin or Po-poplar (*Populus dilatata*), this tree my late father condemned in every place he visited, more particularly if planted in rows as they are frequently found; the chief objection to them is, their loftiness, they overpower every thing about them. I have myself condemned them in every place where I have had the honour of being consulted. In my professional visit to Prussia in 1822, I found the palace of New Hardenberg quite overpowered with a row of Turin Poplars, and having appealed to the good taste of Prince Hardenberg, he had them all taken down, and the building rose up with all its grandeur. The magnificent palaces of the king of Prussia at Berlin and Potsdam (each more than a thousand feet long) are most wretchedly depressed by the rows of Turin Poplars which appeared nearly twice the height of the buildings.

Having fully condemned the Turin Poplar, I will give one word in its favor, that is, it is useful in hiding any unsightly object, but at the same time, I would plant other trees for future effect, and when these trees begin to answer the purpose for which they were intended, we can then take away the Poplars, or perhaps leave a few of them with their heads taken off. I do not mean that these Poplars are to be planted in rows, but in irregular groups, and of different sizes. There is no general rule in laying out grounds, as every place requires a different treatment; but generally speaking, I by no means recommend planting the valleys, but on the contrary, to clear them of trees, and plant the hills.

Mr. Major concludes his observations by advising us by all means "to keep out the frightful object, the black Italian Poplar," to which I may add the same to the Turin Poplar, which disfigures the beautiful scenery of England. Yet upon visiting my friend Mr. Nicholas at Hammersmith, I set my face against the rows of Poplars in his grounds, but upon approaching those near the pond, I found the trunks large and magnificent, and may be truly admired, I think that if the heads of these had been taken off, they would have been very much improved.

There is a row of deciduous trees facing the Thames, and being allowed by Mr. Nicholas to take down one tree only, we obtained from the windows of the house, a fine view of the bend of the river.

R. A. J.

ARTICLE IV.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIE.

*Continued from Vol. V. p. 268.**ELEGANS Loudonensis*, double large light rose, good.*atro rubens*, double dark red.*Fairlea*, double dark red.*alba*, single white.*Futting*, double dark red, white spot, fine form.*Marmorata*, semi double red, very large.*Waldakii* single white.*Anemoneflora alba*, double white.*Ellenora*, double dark crimson red.*Gardenerii*, double white pink spot or stripe.*versicolor*, double dark red white stripe.*semiduplex*, semi double light red." *alba*, semi double white.*longifolia*, single long leaved red.*grandiflora*, single red, very large.*rosea*, double light red, very good.*speciosa*, double dark red, very fine.*rotundiflora*, single round leaved red.*rubricaulis*, semi double red white spot or stripe.*cardinalis*, double dark red.*carnea*, double flesh-coloured.*argentea*, single dark red*crassifolia*, double dark rose, very good.*Warratah purpurea*, semi double.*splendens*, semi double dark red,!*Belle rosalie*, semi double dark red, large.*papaveracea*, single dark red, large.*rosa sinensis*, double light rose, good.*Knightii*, single dark red.*Gussonia*, double dark rose, fine.*coccinea*, semi double dark scarlet.*Brouayana*, double rose white spot, very fine.*sanguinea*, single blood red.

Bedfordii, double dark red, very good.
Conchiflora, double rose.
Viorneani, double rose white spot or stripe.
dilecta, double blood red, very fine.
Dorsetii, very double dark red, white spot or stripe, fine.
fulgida, semi double dark red.
Elphinstonii, very double dark red, fine
amabilis, single white.
Clintonia, double red and white spot or stripe, fine.
Simsii, single dark red.
minuta semi double, dark rose, small flower.
elegans, Chandler's double rose, very good.
Dianthiflora semi double red small white spots.
Dianthiflora carnèa, semi double, flesh coloured.
rubro punctata, single red spotted,
Acubaefolia, semi double light red.

(To be continued.)

ARTICLE V.

OBSERVATIONS UPON THE DAHLIA.

No. II.

BY A STAR IN THE EAST.

MY former communication having met with your approval by an insertion in the Cabinet, I again address you with observations No. 2, and am sorry I have not ere this had an opportunity to do so; during the interval another Dahlia season has terminated, and the character of the different kinds has been proved, and founded on the grower's own experience. The past season, has in general, I have the satisfaction to say, produced a marked improvement in our collections by the addition of many very superior flowers; and although numerous has been the deceptions practised upon the purchasers, by having false recommendations of the qualities of the sorts, I doubt of its being repeated as those persons who have had a little experience in the matter, will be more wary in future.

I have very frequently myself grown most of the seedlings sold out this year, and when in bloom I made notices of the qualities of each, that I might be guided upon their merits another season. I now submit to those readers of your Cabinet who are Dahlia growers, the remarks, judging it might be of use to a great part of them, and as the season is drawing nigh when the plants are sent out, I shall be glad to see its insertion in an early number.

December, 18th, 1837.

Girling's Ruby is a first rate show flower, defective in only being rather small and the colour not being sufficiently decided. It requires to be grown strong, and the branches well thinned away.

G. Suffolk Hero, is another superior flower, and like the above, indispensable to a collection.

G. Topaz, very fine colour, and moderately good for showing, but not to be depended upon.

G. Painted Lady, good formed flower and prettily laced, but too small for show.

G. Master Ransom, forms an improvement upon *picta formosissima*, from which I have no doubt it is a seedling,

G. Goliath, large, and not fit for show.

Jeffrey's Rosea Elegans, fine bright rose, very uncertain, but in its true character one of the best flowers in existence.

J. Sir Robert Harland, a large flower, generally appearing with notched petals, and rather deficient in colour, but may sometimes be obtained good enough to show.

Cameron's Shakespeare, quilled purple, dull colour, and only a poor flower.

C. Countess of Mansfield, moderate, sometimes appearing with a hard eye.

C. Duke of St. Albans, very paltry.

Squibb's Shakespeare generally comes most beautifully shaded orange and red, the flower is not full enough for a small stand, but will be found very useful in a 24 or upwards.

S. Mary of Little Park, is very pleasing in colour, but, large, wide, and ugly in form.

Bristol Perfection, very dark, uncertain, and the flower rather too thin, but occasionally fine.

B. Vicar of Wakefield, is only moderately good, too flat, and the back petals completely fall, before the flower is expanded, and the colour is dull.

Gaines's Ada, a large blush flower, moderately good, but too thin and flat for a stand of less than 36.

G. Countess of Jersey, petals too much involuted to form a show flower.

G. Brilliant, simliar but worse than the last.

G. Sergeant Talfourd, is too much quilled, and though of a pretty colour, the blooms are too tender to carry to an exhibition.

Barnes's Rival Queen, a very neat formed flower, but not of the right stamp to qualify it for competition with our prize flowers.

B. Regulator, is much too starry and hard in the eye, ever to obtain approval.

Salter's Ion, trash, have grown two plants of this, neither of which has produced a double flower.

Harding's Mary Queen of Scots, is very good when perfect flowers can be obtained, which is seldom. It requires to be grown strong and well cut away.

Foster's Australia, is a crimson red frequently shaded, rather too thin of petals around the eye, but may sometimes be introduced as a show flower.

F. Beauty of Kingscote, is a splendid large light flower with a deep and regular lace of crimson purple, and though rather flat in form, no collection should be without it.

F. Eva, is one of the best flowers grown, almost every bloom produced being perfect, and I have no doubt it will be in great demand the coming spring.

F. Kingscote Rival, a fine bright pink coloured flower, the petals are rather pointed, and is rather too flat in form, notwithstanding which, it is a good flower.

Knight's Lady Webster, is very uncertain, curious colour, and oftentimes coming with an open eye, but when good the form is unique; it will only come in as a front row flower in a stand, in consequence of being rather small.

K. Victory, a bold deep crimson flower, not cupped, but of very superior form, nearly always coming full and fine; all who have seen it, holds it in high estimation.

Diadem of Perfection, light rosy crimson, beautiful form, but rather small.

Thompson's Rival, beautiful shaded light crimson and dark, finely cupped, but often the flowers are disfigured, with a hard green eye.

Faulkner's White Perfection, is an improvement upon Mrs. Wilkinson, which it much resembles both in colour and form.

Springfield Rival Major, is a fine large deep crimson flower, though not equal to Knight's Victory.

General Gomez, a disgrace to the grower who sent it out.

Dray's Anacreon, only fit for growing to please the curious.

D. Blandina, rather small and somewhat inferior to others of the same class.

D. Coriolanus, light purple, moderately good formed, but rather too flat.

D. Glory of the West, is the best of this person's seedlings, I find it rather difficult to procure a good bloom, now and then however it is beautiful, in which state it is decidedly the most superior in its class.

D. Goldfinder, is similar to Blandina, small and inferior to several others of the same class.

D. Lord Ashley, deep purple, flat, and only very moderate.

D. King Harrold, a very large and indifferent flower.

Harrison's Agnes de Castro, is distinct and striking. The blooms are frequently not full enough, but occasionally a show flower may be obtained.

Widnall's Lady Dartmouth is very uncertain, but when obtained in its true character, beautiful.

W. Juliet, a good showy flower, but somewhat uncertain.

W. Marchioness of Tavistock, a pretty good flower when caught in perfection, and an improvement upon Royal Adelaide, like it however, it is too flat.

W. Victoria, a very neat and pretty flower, but almost too small for showing.

W. Sir W. Scott, an improvement upon *Picta formosisima*. but the petals are so much pointed as to disqualify it for exhibition.

Barratt's Stuart Wortley, is a light purple, uncertain, and though not first rate is a pretty good flower.

Striata perfecta, complete trash.

Wilmer's Queen's superba, is exceedingly uncertain, generally appearing with the fatal disfiguration of an open eye; now and then it may be obtained very fine, in which state it is the best yellow that has come under my notice.

Elphinstone's Conqueror of Europe, a very good flower, occasionally its principal fault is, so frequently coming full of florets, and the flower not being quite full enough; notwithstanding, it is indispensable to a collection.

E. Miss Elphinstone, is rather too much quilled, and too flat, but a good flower.

E. Rosa superba, deep rose, good.

E. King of Beauties, paltry.

E. King of the Yellows, very fine bright yellow, good show flower, though not first rate.

E. Purple Perfection, now and then very good, but exceedingly uncertain.

E. Queen of Trumps, beautiful colour and neat flower, but unless grown very strong too small for showing.

E. Mrs. Broadwood, similar to the latter, small, and requires to be grown strong.

E. Marquis of Northampton, is a very fine full show flower, but from being somewhat uncertain, it should be divided into three plants and sown early by which means a first rate bloom may almost at any time be gathered, no collection should be without it.

Elliott's Berkshire Champion, is a beautiful dark flower frequently shaded with light purple, almost always appearing perfect, and is one of the most unique flowers grown. On account of the flowers inclining to be rather small it requires to be grown rather strong, and I understand very few people has had the good fortune to possess it, consequently the coming season will bring a great demand for it.

Harris's Miss Harris, is a curiously suffused light purple and white flower, but not fit for show.

Melbury Rival, large crimson, only moderate.

Mayle's Beauty of Bedford, most beautiful shaded purple, and may sometimes be obtained good enough for show, although not of first rate form.

Lane's Sir John Sebright, very uncertain but occasionally pretty good,

(To be continued.)

REVIEW.

The Rose Amateur's Guide. By T. Rivers, Jun. containing ample Description of all the fine leading varieties of Roses, regularly classed in their descriptive Families, their history and Modes of culture; in Two Parts. Part I. The Summer Rose Garden. Part II. The Autumnal Rose Garden.

Every person who takes an interest in this beautiful tribe of plants, ought to procure this very interesting book. It contains a description of a number of the best Roses in each particular class, with some judicious remarks on their culture. It is divided into two parts. Part I. includes remarks upon the following classes of Roses.—

The Provence Rose, The Moss Rose, The French Rose, Hybrid Provence Rose, Hybrid China Roses, Rosa Alba, The Damask Rose, The Scotch Rose, The Sweet Rose, The Sweet Briar, The Austrian Briar, The Double Yellow Rose. CLIMBING ROSES, The Ayrshire Rose, Rosa Multiflora, The Evergreen Rose, The Boursault Rose, Hybrid climbing Roses.

Part II. Perpetual Roses, The Bourbon Rose, The Chinese Rose, The Tea-scented Chinese Rose, The Miniature Rose, The Noisette Rose, the Musk Rose, the Macartney Rose, Rosa Microphylla, an abridged list of Roses.

We have selected the Remarks upon one class of the Summer Rose Garden, and one from the Autumnal Rose Garden, that our Readers may form an estimate of a Work so well worth possessing.

HYBRID CHINA ROSES.

"The superior varieties of this fine division give a combination of all that is or can be beautiful in roses, for not only are their flowers of the most elegant forms and colours, their foliage of extreme luxuriance, but their branches are so vigorous and graceful, that perhaps no plant presents such a mass of beauty as a finely grown hybrid China rose in full bloom. They owe their origin to the China, Tea-scented Noisette and Bourbon roses, fertilized with the French Provence, and other summer roses, and also to the latter crossed with the former; the seeds of such impregnated flowers producing hybrid China roses. These have, in many cases, resulted from accident, but latterly from the regular fertilizing process, as mules or hybrids have been raised from well known parents.

In England, but few varieties have been originated; as the common China rose does not in general ripen its seeds sufficiently for germination. The parents of Brown's superb blush, which is an English hybrid, raised by the late Mr. Charles Brown of Slough, one of the most scientific and persevering cultivators, cut off in the prime of life, was the old tea-scented rose, Rosa

indica odorata, impregnated with some hardy summer rose. Rivers's George the Fourth is also an English rose; but as this came by accident, its origin is not so well ascertained. *Rosa Blairii* is also English, and raised from the yellow China, impregnated with some variety of hardy rose. All the roses have the true characters of the family; leaves smooth, glossy, and subevergreen; branches long, luxuriant, and flexible. They give a long continuance of bloom, but they never put forth secondary or autumnal flowers. This is a most peculiarly distinguishing trait, and an interesting fact. Impregnate a Bourbon, China, or Noisette rose, all abundant autumnal bloomers, with the farina of a French or Provence rose, and you entirely take away the tendency to autumnal blooming in their offspring. They will grow vigorously all the autumn, and give a long, but not a secondary series of flowers. Some of these hybrid China roses, produce seed abundantly, which is rather a remarkable feature, as so few hybrid plants are fertile.

Hybrids produced from the French rose impregnated with the China rose, are not of such robust and vigorous habits as when the China rose is the female parent; but perhaps this is an insertion scarcely borne out by facts, for the exceptions are numerous, and, like many other variations in roses and plants in general, seem to bid defiance to systematic rules. By some cultivators the roses of this division have been much more divided than in my catalogue, forming "*Hybrid Noisettes*," "*Hybrid L'Isle de Bourbons*," &c. &c.; but all these owe their origin to the common China rose, their offspring may with justice be called hybrid China roses.

Those who have been raised from noisette roses have a tendency to produce their flowers in clusters; those from Bourbon roses have their leaves thick, leathery, and round; those from the tea-scented have a delicate and grateful scent; but all have those distinguishing family traits as before given, and accordingly they group beautifully. As this is the grand object of the amateur cultivator, it seems far more preferable to arrange them as one family, than to make several divisions with but very minute distinguishing features. It is a difficult task to point out the best in this division, as they are nearly all well deserving of cultivation. However, by making a few remarks, such as cannot be given in a descriptive catalogue, I may perhaps be able, in some measure, to direct the choice of amateurs to those most worthy their notice.

Adolphe Cachet is a rose not much known; but a very double, well shaped and distinct variety. *Attelaine de Bourbon*, the *Athelin* of some French catalogues, is a hybrid Bourbon rose, scarcely double enough, but exceedingly beautiful. It has finely shaped flowers, and blooms in large and erect clusters; its colour is of that vivid rose so peculiar to the Bourbon roses. As this bears seed freely, it will probably be the parent of numerous fine varieties. *A fleurs marbré* is a small, but very brilliant marbled rose, one of the prettiest of this division. *Adele Ancelin* is a most delicate coloured and beautiful rose, very perfect in its shape, and distinct in character.

Bonne Geneviève. This rose, under the name of "*Beauté ethereal*," and described as "*purple margined with crimson*," has been sold extensively. It is a most beautiful and perfectly imbricated rose. *Brennus*, the *Brutus* of some collections: this very superb rose, will form a finer object as a pillar rose or standard, than as a blush; its luxuriant shoots must not be shortened too much in winter pruning, as it is then apt to produce an abundance of wood, and but very few flowers. This rose, often puts forth branches in one season from eight to ten feet in length; if these are from a dwarf, and are fastened to a wooden or iron stake, and not shortened, the following season they will form a pillar of beauty but rarely equalled. *Blairii*, a rose not so much known as it deserves to be, is a very distinct and unique variety, so impatient of the knife, that if pruned at all severely, it will scarcely put forth a flower: it is perhaps better as a pillar rose, than grown in any other mode, as it shoots ten or twelve feet in one season, and its pendulous clusters of flowers which are produced from those long shoots unshortened, have

a beautiful effect on a pillar. Beauty of Billiard is, of all roses, the most glowing and beautiful: its colour is described in the catalogue as scarlet; but it is rather a fiery crimson, so vivid that it may be distinguished at an immense distance. This rose also requires care in using the knife; the extreme tips of the branches may be cut off, and some of them thinned out; it will then bloom in great perfection, but care must always be taken in winter pruning to leave its shoots nearly their full length. Becquet is a pretty distinct dark crimson flower, very double and well shaped. Belle Marie is a first rate rose, finely shaped, and a good show rose. Belle Parabere is a very remarkable variety of inconceivable luxuriance; its flowers are very large; it will in good soils, as a standard, soon form a large umbrageous tree. Belle de Rosny is a hybrid noisette, blooming in very large clusters, of first rate quality. Catel is one of our finest dark roses, very double and finely shaped, quite worth the notice of the amateur. Coccinea surperba, or "Vingt-neuf juillet," is a rose alike beautiful in its flowers and foliage; in early spring its leaves and shoots are of a most vivid red, and this appearance they retain the greater part of the summer; its flowers are brilliant in the extreme, crimson purple shaded with scarlet: the shoots of this rose must also be left at nearly their full length.

Coupe d'Amour richly deserves its name, for it is a beautiful neat rose, quite perfect in its form and colour.

Coronation is one of those purple shaded roses, inclining to slate, imbricated, and very perfect in its shape. Chatelaine is a hybrid Bourbon rose, dove coloured, finely shaped, and very good. Coutard may be safely recommended as a most perfect and good rose, flowering with great freedom, and beautiful either as a dwarf or standard, Colonel Fabvier, a sterling good rose, is remarkable for its delicate fragrance. The Duke of Devonshire is an imbricated rose, one of the great favourites of the day, and most deservedly so, for its rosy lilac petals are so delicately striped with white, and its shape is so perfect, that it will always be admired. Duc de Choiseul is not a new variety; but as it is between the China and Provence rose, which is a species of hybridisation not very common, it is interesting: it forms a very fine standard. Duc de Choiseul punctuee, or the spotted, is a most distinct and pretty variety; this makes long and slender shoots, and is well adapted for a standard. Daphne is a hybrid Bourbon, and one of the most beautiful of roses: it has the brilliant colour of that interesting group, and the fine foliage, but its flowers are much more double than the generality of Bourbon roses. Dr. Guepin is a most perfect shaped, globular rose, quite distinct in its character; this, with a few others, which will be noticed in their turn, have beautiful spherical-shaped flowers, singular and pleasing. Eugene Barbet is also one of these finely formed roses, with dark purplish crimson flowers of first rate excellence. Elizabeth Fry is a hybrid noisette, blooming in large clusters, a most brilliant and pleasing rose. Fulgens, or the Malton rose, is certainly one of the most brilliant and beautiful of roses; the entire plant is also worthy of admiration, independent of its magnificent globular scarlet flowers, as its foliage is so abundant, and so finely tinted with red; its branches so vigorous, and yet spreading so gracefully, that it forms one of the very finest of standard roses. Fleurette offers quite a contrast in its small delicately coloured, and finely shaped flowers, it is a desirable and pretty variety. Fimbriata is a most curious and beautiful rose: each flower leaf is cut something like the petals of a pink, and as it is imbricated, it looks more like a large self-coloured carnation than a rose. General Lamarque is one of the darkest of roses, a most luxuriant grower, and very distinct: in wet weather it is apt to lose its colour, and to change to a dull brown."

(To be Continued)

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1. BOUSSINGAULATIA BASSELOIDES. *Bascella-like* [Bot. Mag. 8620.

CHENOPODEÆ. HEXANDRIA, MONOGYNIA,

A native of South America, near Loxa, in the Quintinian Andes. Mr. Tweedie sent it to the Glasgow Botanic Garden from Buenos Ayres. It is a very desirable hothouse plant. The root is fleshy and knotted, much in the way of the common border plant, Solomon's Seal, and each extremity throws up a rounded and branching twining stem. The leaves are fleshy, cordate, and at the lower part of the stem, are from four to five inches long. The flowers are produced on graceful racemes, each from three to five inches long, bearing numerous, greenish-white blossoms, which are highly fragrant. Each blossom is about a quarter of an inch across. The racemes of flowers are produced at the opposite of the leaves, and nearly every leaf is thus accompanied. The plant merits a place in every plant stove. It is very probable it would flourish well in a good greenhouse. Boussingault, a celebrated naturalist and traveller in South America.

2. ANIGOZANTHUS MANGLESII, var, ANGUSTIFOLIA. *Narrow-leaved.* [Bot. Reg. 2012.

HEMERDACEÆ. HEXANDRIA MONOGYNIA.

A native of the Swan River, from whence it was sent by Sir James Stirling to R. Mangles, Esq. The variety is distinct from the beautiful *A. Manglessii*. It differs in having much narrower leaves and smaller flowers, which are rather of reddish orange, colour at the base an entire green; these being covered with feathery hairs, which have a pretty effect. The plant is an herbaceous perennial, the flower stems rise about a foot high, each plant is of easy culture, but in order to succeed well, it requires to have a small portion of chalk mixed with loam and peat. It is not very tender, only requiring the protection of a frame in winter. *Anigozanthus*, from anistho, I rise up, and anthos, flower.

3. COSMUS TERMIFOLIUS. *Fine leaved.* (Bot. Reg. 2007.

ASTERACEÆ. SYNGENESIA SUPERFLUA.

Another interesting and handsome flowering annual from Mexico. Seeds of it had been presented to the London Horticultural Society, by G. F. Dickson, F. H. S. in the garden of the Society, it has recently bloomed. The flowers are more than two inches across. The disk is yellow, the petals are of a fine rosy purple, and make a very showy appearance. The beauty of the foliage is very striking having a fennel-like appearance, and with it the flowers make a fine showy contrast. The plant grows to about two feet high. When the seeds are sown late in the spring, the plants usually bloom so late in autumn that seeds can rarely be obtained, but by sowing very early in spring in pots, and transplanted out, they bloom early and ripe seeds may be gathered. Or if sown late in summer in pots, and be preserved in a cool frame or Greenhouse through winter, such plants turned out early in spring will succeed best, and bloom through a great part of the sea-

son, and its beauty will amply compensate for such attention to its culture. *Cosmea*, from *kosmos*, beautiful, in allusion to its appearance.

4. *DOMBEYA CANNABINA*, *Hemp Dombeya* (Bot. Mag. 3619.

BYTTNERIACEÆ. MONODELPHIA POLYANDRIA.

A native of Madagascar, and was sent home by the late Charles Tell-fair Esq. to the Glasgow Botanic Garden. The plant has much the habit and appearance of *Astropœa Wallichii*. It has the less spreading petals and the long staminal tube of *Astropœa*, but the inflorescence and the absence of involucre of *Dombeya*. The plant bloomed for the first time in the stove at the Glasgow Garden in 1837. The flowers are produced in a corymb of many closely placed flowers, which are white, having a large staminal tube, twice as long as the flower; it is white, with a tinge of red. *Dombeya*, in Compliment to Joseph Dombey, an eminent South American traveller.

5. *CAMPANULA BARBATA*, var. *CYANEA*. *Dark blue-bearded Bell flower*. (Brit. Flow. Gard. 409.

CAMPANULACEÆ. PENTANDRIA MONOGYNIA.

This variety was raised from seeds in the apothecaries garden at Chelsea, where it bloomed last July. It is peculiarly distinguished from the more ordinary state of *C. barbata* by its dark blue flowers, the usual colour of the original species being a pale blue, and occasionally milk white. The plant varies too in bearing one or more flowers on a stem. Each flower is upwards of an inch long, and the mouth of the corolla about three quarters of an inch across. The stems rise to about nine inches high. It is a very pretty flowering variety.

6. *DRACOPHYLLUM CAPITATUM*. *Round headed flowers*. (Bot. Mag. 3624.

EPACRIDÆ. PENTANDRIA, MONOGYNIA.

A very pretty greenhouse shrub; a native of New Holland. It grows about half a yard high, with erect twiggly branches, similar to the *epacris*'s. The flowers are produced in terminal heads, they are of a pure white, each head contains eight or ten blossoms, and each blossom is about a quarter of an inch across. It is a neat and pretty flowering plant. It is cultivated in the Glasgow Botanic Garden. *Dracophyllum*, from *drakos*, draco, and *phyllum* a leaf, from the resemblance of the leaves to those of *Dracæna Draco*.

10. *HIBISCUS LILACINUS*. *Lilac coloured Hibiscus* (Bot. Reg. 2009.

MALVACEÆ. MONODELPHIA POLANDRIA.

A native of the Swan River, from whence seeds were sent into this country by Sir James Stirling, to R. Mangles Esq. Summing Hill, Berkshire. The appearance of the plant is very different to the species long grown in the gardens of this country. The leaves are filiform, parted. The flowers are single, about three inches across, of a pretty lilac colour, whitish towards the base of the petals. It will thrive well in the open ground during summer, but it is probable it will require protection during winter.

8. *PHILIBERTIA GRANDIFLORA*. *Large flowers*. (Bot. Mag. 3618.

ASCLEPIADÆ. PENTANDRIA DIGYNIA.

Mr. Tweedie sent seeds of this very handsome flowering plant from Buenos Ayres to the Glasgow and Dublin Botanic Gardens, where it has recently bloomed. It is likely to succeed well in the greenhouse, and would be one of the most ornamental of greenhouse climbers.

PART III.

MISCELLANEOUS INTELLIGENCE.

 QUERIES.

ON HEARTSEASE DYING—Having for two or three years past grown a few varieties of this lovely tribe, now such a general favourite. I will feel obliged if you or any of your correspondents could inform me from what cause it is that so many of the plants in my bed this last July went off with some peculiar disease; the plants even when in full bloom, assuming a black appearance, gradually growing yellow, and dying away; nor upon lifting them, in this state, could I discover any worm or other insect at the root. I may mention that I have grown them successfully for two years and they bloomed very well upon the same spot. Could this be the reason of their failure this season? an early answer will much oblige your constant subscriber.

COLYCINTH,

ON DAHLIA FLOWERS.—I have in my garden about forty or fifty Dahlias of pretty fine kinds, but being a new grower, I would esteem it a favour if some reader would answer the following query—I observe in almost all my plants three buds to shoot out from one branch and conclude that two of them should be taken away, leaving the third to flower. Therefore should the bud so left be the middle or centre one, which I think is invariably in a more forward state than its companions, or will the buds on each side of it produce finer flowers, and consequently one of them kept. TRUE BLUE.

 REMARKS.

NEW PLANTS.—*Chrysanthemums*. We visited the nursery of Messrs. Chandler's nursery, Vauxhall, to see the splendid show of *Chrysanthemums*, which very far exceeded our expectations, being most strikingly beautiful. We subjoin the following list of what we saw:

- Queen.—Light rose, flower double, moderate size, early.
- Marquis. Light pink, flowers double, large and in clusters, early.
- Triumphant. Pink and buff, large, early.
- Bicolor. White and yellow, flowers small, very double, dwarf, early.
- Chancellor. White and pink quilled, flowers large and incurved, late.
- Formosum. Incurved white, with lemon coloured centre, early.
- Lucidum. Incurved white, early.
- Enchantress. Incurved creamy white, flowers large, late.
- Spectable. Quilled white, early.
- Gem. White with pink tips, early.
- Vesta. White, flowers very round, cupped petals, early.
- Marchioness. White, with a little pink on the outer petal, early.
- Coronet. Clustered white, round petals, early.
- Imperial. Incurved French white, flower large, early.
- Eminent. Light pink, incurved, late.
- Compactum. White, flowers small, very double, late.
- Goliath. Yellowish quilled white, very large, incurved, early.
- Conspicuum. Crimson, flowers very large, semi double, early.

Insigne. Pink and red, early.
 Magnet. Yellow, flowers rather small, a little quilled, early.
 Elegans. Lilac, flowers rather small, very regular, late.
 Surprise. Paper white, flowers large, early.
 Invincible. Reflexed creamy white, large, very double, late,
 Mirabile. White, buff tint, compact flower, dwarf, early.
 Diadem. Quilled white, early.
 Perspicuum. Quilled Pink, flowers large, late.
 Angelina. Straw colour, quilled, late.
 Rosalind. Quilled pink, early.
 Calypso. Dark rose, flowers small, early.
 Defiance. Silvery white quilled and incurved, late.
 Decora. Rose, flowers large, early.
 Virginia. Quilled white, early.
 Flavescens. Lemon coloured, flowers small, early.
 Eclipse. Incurved paper white, late.
 Adonie. Clustered pink, a little quilled, early.
 Pulcherrimum. Rose, white tips, very double, late.
 Victory. White large reflexed white petals, dwarf, early.
 Celestial. Rosy white, flowers compact, dwarf, early.
 Cleopatra. Pink and buff, early.
 Unique. Light pink twisted petals, early.
 Glory. Large paper white, flat petals, late.
 Grandis. Flesh colour, large flat petals, early.
 Empress. Tasselled pink, flowers large, late.
 Hero. Rose, flowers large, late.
 Eximium. Rose, flowers round, rather small, early.
 Aurantium. Quilled orange, early.
 Rival. Light rose, incurved semi double, late.
 Adventure. Bright yellow, early.
 Sulphureum, pale yellow, flowers in clusters, early.
 Penelope. Buff, flowers round, semi double, early.
 Venus. Light rose, with red eye, flowers small, early.
 Diana. Quilled white, late.
 Conqueror. Large French white, flat petals, early.
 King. French white, flowers large incurved, late.
 Striatum. Light rose and red striped, late.
 Champion. Reflexed lemon colour, large flat petals, late.
 Countess. Creamy white, large, semi double, late.
 Grandissimum. Incurved white, late.
 Perfection. Incurved lilac, flowers large, late.
 Aurora. Purple, flowers large and quilled, late.
Physostegia truncata. This new hardy herbaceous plant, is much like the *Drawcocephalum* genus, the flower stalks rise about half a yard high, producing numerous flowers of a pretty rose colour, spotted in the inside with red. It is well worth a place in the stove or garden. Mr. Young, of Epsom possesses the plants.

Impatiens scapiflora. A new stove species of Balsam from Ceylon, the flowers are of a delicate rosy-lilac colour, very different in appearance from the common Balsam; and are produced in profusion, having a neat and elegant appearance. It has bloomed for the first time in this country (we are informed,) at Mr. Young's of Epsom.

Convolvulus Pintestum. A new hot house species, which we saw in bloom at Mr. Low's, Clapton Nursery, the flowers are rather small, of a bright blue colour, and are produced in vast profusion. It deserves a place, as a climber in every collection of stove plants.

Loasa aurantiaca. We saw this new and handsome flowering species in

bloom at Mr. Young's, Epsom. It is a greenhouse plant of a twining habit, the flowers are more than an inch across, of a fine deep orange colour; produced in abundance, and hang in a very graceful manner. It is a fine autumnal flowering plant, well worth a place in every greenhouse.

Nemophila atomaria. A new species now in bloom in the greenhouse at Mr. Young's, Epsom, the flowers are not so showy as *N. insignis*, but are very pretty, they are white delicately spotted with blue.

Cborizema manglesii. This fine new species is in bloom at Messrs. Rollinsons, Tooting Nursery. The plant is of a very fine luxuriant habit, much more so than *C. ovata*; and the flowers, though of the same colour as that species are much larger, making a very showy appearance. It well merits a place in every greenhouse.

Thunbergia lutea. This new and pretty flowering species we saw in bloom at Mr. Low's, Clapton nursery, the flowers are about the size of *T. alata*, of a paler yellow colour, without a dark eye. It is a neat and interesting species well worth growing.

Verbena aranana—named in compliment to the Earl of Aran. This beautiful plant proves a great addition to that already interesting tribe, it is decidedly more shrubby than *V. Tweediana*, the blooms are of a bluish purple colour. It originated from seeds sent by Mr. Tweedie, from Buenos Ayres, to the Edinburgh and Dublin Botanic Gardens.

Passiflora. A fine hybrid variety, is in bloom at Mr. Knights Nursery, Kings Road. It has been raised between *P. princess*, and *P. alata*. The flowers have the graceful form &c. of the former, and are of a beautiful cream colour. The plant has the vigorous habit of the latter species. It is a valuable acquisition, and when grown in contrast with *P. princess* will produce a pretty effect

REFERENCE TO PLATE.

Clintonia pulchella. This very neat and elegant little annual is a native of California, where it was discovered by the late Mr. Douglas. Seeds of it were sent to the London Horticultural Society, and since have been liberally distributed through the country. It is a hardy annual, ripening its seeds freely. The plant grows procumbent, rising about six inches high, and producing a profusion of bloom. It is very neat for a small bed, edging for a bed, rock work, or in patches in the general mixture of a border. It deserves a place in every flower garden. Seeds may be obtained of most Seedsmen.

Glycine Harrisonia. A greenhouse plant of extraordinary beauty. The flowers are produced in long racemes, of ten or twelve on each. Each blossom is, at least, three times the size of those figured, our limits not allowing a figure of the full extent. The blossoms at first are white and violet, afterwards changing to yellow and brown.

The plant grows very rapidly, climbing to the extent of twenty feet in a season, and producing a profusion of flowers. When trained under a roof as the vine, the blossoms hanging in abundance, have a beautiful appearance. They are delightfully fragrant, perfuming for some distance around. We do not know the native country of the plant, a seed of it had been sent to a friend of ours, who presented us with the plant. We shall have a number for sale in the course of this spring.



Lisianthus Russellianus



Cosmos tenuifolius



Verbena Arvensis

THE
FLORICULTURAL CABINET,

FEBRUARY 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF HYACINTHS.

BY MR. JOHN FYFFE, GARDENER, MILTON BRIANT RECTORY.

THE Hyacinth may well be esteemed as one of the finest hardy bulbs that adorn the flower garden, the tulip may surpass it in its gaudy robes and tinsel show, but the Hyacinth not only gratifies the eye with its rich and delicate spike of flowers, but charms the beholder with its rich and delicate perfume. The following is the mode which I have practised very successfully in growing the Hyacinth; it may not be new to some of your numerous readers, but it is a sure and certain way to procure fine spikes of flowers provided the bulbs are good, and to others the remarks may be of service.

The compost I use is of the following proportions, one part of vegetable mould, one rotten cow dung, one sand, and one light loam, having them well mixed.

The bed is filled to the depth of two feet, keeping the centre of one foot above the surface of the pathway, which allows all superfluous moisture to escape.

The bulbs are planted in white sand to keep them from rotting before they start.

They are greatly benefitted by being covered with three or

VOL. VI. No. 60.

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four inches of leaf mould, or short dung from an old hot bed, which protects them from injury by frost, and enriches the soil. If, however, severe frosts sets in after the bulbs appear above the covering of dung, I protect them with hoops and mats.

By the above mode of treatment I have flowered the same bulbs a second season, with an equally good show of flowers.

J. FYFFE.

ARTICLE II.

ON GRAFTING THE DAHLIA.

BY MR. WRIGHT, WALWORTH.

It happens not unfrequently, that the tubers of Dahlias either have no eyes, or the crown has become so hard and woody, that the young shoot cannot force its way through it. Unless the shoots, for example, slipped off from the tubers in the spring, have attached to their lower extremity a number of incipient buds, indicated by the extremity appearing convex, while the part it was taken from is concave, the new tubers formed during the summer will often be what the gardeners term blind; for though large and fully formed, they are merely attached to a hollow stem, and will not break the following season. This is prevented by taking care to have the slip taken with a convex extremity, or a piece of the tuber attached.

When tubers are found to be blind, the eyes or buds of fine sorts, of which the supply is limited, may be advantageously grafted upon them; picking them out with a grafting knife, so as that a small piece of the original tuber remain attached. On the neck of the blind tuber, cut a notch to receive this bud or eye, which is to be inserted so that the base of the bud be exactly on a level with the surface of the tuber. It is to be fixed in this position with grafting wax. The grafted tuber is then planted in a pot, kept under a glass, and treated like an ordinary cutting. It is scarcely necessary to remark, that the graft bud must not be buried, but left above the surface of the mould in the pot.

When the plants have been forwarded in any of the modes above described, so as to have healthy stems, they may be planted out for flowering about the end of May or the beginning of June, but it is better not to be too early; for one night's frost may do them irreparable injury.

C. WRIGHT.

ARTICLE III.

OBSERVATIONS UPON THE DAHLIA.

No. II.

BY A STAR IN THE EAST.

(Continued from page 16.)

Miss Hortense, Yellow distinctly tipped with white, very remarkable, but not fit for show.

Miss Cook, Cupped red, rather too small for show,

Harding's Metropolitan White, is not a cupped flower, but moderately good, and ought to be grown.

Kington's Incomparable White, which, although very pure in colour and cupped, the flower not sufficiently full.

K. Maid of Judah, a pretty good flower, always well up in the centre.

K. Victorious, very poor and starry.

K. Magnet, only moderate at its best

K. Malbran, similar to the last.

K. Nimrod, fine cupped show flower, best of its class, and also of Kington's seedlings.

Forsyth's Vestal Bride, uncertain, but sometimes pretty good.

Rhoda, small, but pretty flower.

Countess of Longford, very pretty laced purple on a yellow ground, requires to be grown in a rich soil.

Agnes Graham, small and paltry.

Addison or *Louthianum*, a splendid cupped show flower, richly shaded, and indispensibly necessary to every collection.

Seale's Cleopatra, white, a little pointed, but very good.

Nulli Secundus, a dazzling scarlet and good show flower.

Dod's Mary Queen of Scots, sometimes a hard eye, occasionally a good show flower, but not, however, equal to *Dod's Mary*.

Young's Robert Buist, a bold re-flexed show flower.

Harding's Duchess of Montrose, rather too flat, petals sometimes notched, and colour not decided, but notwithstanding these imperfections, it is a good show flower.

Stanford's Rival Scarlet, a good show flower.

Brahmin Superb, uncertain, but occasionally first rate blooms are to be obtained.

Hedlay's Golden Sovereign, large re-flexed bright yellow, only very moderate.

Lady of Oulton, petals involuted, only moderate flower.

Pamplin's Middlesex Rival, very good show flower, large and generally to be depended upon.

Etonian, is somewhat uncertain, but very good in its best character.

Mountjoy's Carmine Perfection, very neat and good show flower.

Jackson's Lady de Roos, a very neat flower.

Whittle Harvey, large loose flower.

Gil Blas, bronze, a good flower

Skirving's Duchess of Sutherland, uncertain, from sometimes appearing with a hard eye, but now and then very fine and first rate.

Rival Sussex, a very good flower, first rate.

Lownde's Bianca, white, of middle size, good flower

Doctor Hawtry, large cupped flower, moderately good, but will not do for a small stand.

Charles Kenrick, good for nothing.

Metropolitan Purple, moderate, but rather too starry.

Brown's Quilled Perfection, occasionally very fine, but very uncertain and rather too much quilled.

ARTICLE IV.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIA.

Continued from p .11.

Floyii, semi double fine red, very large, like *reticulata*, extra.

Rosea, double, very light red foliage, like *myrtifolia*, (new var. from China.)

Imbricata alba, double white with red spot or stripe, fine form.

Kermocina, double dark red, good.

Superbissima, double carmine, white stripes, extra fine.

Fasciculata speciosa, flesh colour, white stripe or spot, extra.

Corperii, double white, red spot or stripe, good.

Jussieu, double light rose, cupped petals, fine form.

Gilesti, double dark red with white spot or stripe, extra fine.

- Variabilis*, double rose, blush or white, sometimes flowers, of all the three colours on the plant at the same time.
- Expansa*, semi double, dark red.
- Blanda*, double blush, Warratah form.
- Epsomensis*, semi double, light red.
- Brownii*, double dark red, large and fine.
- Excelsia*, Rollinson's, double clear white.
- Anemoneflora carnea*, double flesh colour.
- " *rosea*, double light rose.
- " *striata*, double red, white spot or stripe.
- Spofforthiana rosea*, double light rose.
- Woodsi*, double light red, large flower, good.
- Eximia*, double fine red, beautiful form, extra fine.
- Ochroleuca*, double pale yellow, good form, extra fine!
- Nivalis*, double clear white.
- Punctata major*, double blush, red spot or stripe, large and extra fine.
- Concinna*, double fine rose, very good.
- Concolor*, double bright red, very good.
- Ignescens*, double bright red, large flower, fine.
- Frazera*, semi double, light red.
- Susanna*, double white, pink stripes, extra.
- Maculata*, semi double white, pink spots or stripes.
- Martha*, double blush with pink stripes, extra.
- Madieana*, double white, large flower, good.
- Ranunculiflora striata*, double red, white stripes.
- Compacta*, double white, good.
- Incarinata*, semi double, flesh colour.
- Gardineaflorea*, semi double, pale white.
- Kellyana*, double light red, small white spots, very pretty.
- Smithii*, double light rose, very good.
- Alnutii*, double white, very large and good.
- Sabiniana*, double rose, very good.
- Pendula*, Cunningham's, double red, white stripes, extra fine.
- Coronata*, double light red, very good.
- Adelaidii*, double light rose, good.
- Pomponia*, double blush.
- Purpurescens*, single dark red, white spot.
- Pæoniæflora*, double, very light red.
- " *alba*, double pale white.
- Sweetiana*, double rose, white spot or stripe, extra fine.

Beelii, double light red, beautiful form, petals cupped, extra.

Imbricata, double light red, sometimes with white spots, beautiful form, extra.

Perfection, Palmer's, double dark red, cupped petals, one of the finest Camellias known

(To be continued.)

ARTICLE IV.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

HAVING recently derived pleasure and profit from reading the Cabinet, I forward some observations on the Shrubbery for insertion therein, not doubting but the readers will derive some satisfaction in perusing them:—

“THE Shrubbery is a style of pleasure-garden which seems to own its creation to the idea that our sublime poet formed of Eden. It originated in England, and is as peculiar to the British nation as landscape planting. Whilst other arts have been derived from ancient, or borrowed from modern inventions, this has indisputably sprung from the genius of our soil, and is, perhaps, one of the most delightful, as well as most beneficial of all that claim the name of elegant.

Ornamental plantations are now so universally spread over the face of this country, that our island may be compared to a vase emerging from the ocean, into which the Sylvens of every region have set their favorite plants, and the Flora of every climate poured her choicest gifts, for the embellishment of the spot round which Neptune throws his fostering arms. Our ambition leads us to hope that we may add pleasure to the pleasure-ground, by pointing out the beauties of the shrubbery, which must render vegetation an object of admiration and veneration to all classes. I wish to attract attention to the peculiar pleasing properties of each plant, by the remarks of the ingenious, the anecdotes of the ancients, the harmony of the poets, the observations of the physicians, and the reflection of the moralists of all ages. Morality, however, of a gloomy cast will be avoided; for my wish is to give the work like the subject, a smiling aspect,

Though flowering shrubs seem to contribute nothing to potage, and little to Medicine in its present refined state, yet they add greatly to our pleasure, and considerably to our health.

They win us to good humour by their fragrance and cheerful appearance, and produce a serenity of mind by the calm reflections they present to it; thus relieving some of the maladies of the soul, as drugs mitigate the grosser and more perceptible sufferings of the body.

"The spleen is seldom felt where Flora reigns,
The low'ring eye the petulance, the frown,
And sullen sadness, that o'ershade, distort,
And mar the face of beauty, when no cause
For such immeasurable woe appears:
These Flora banishes, and gives the fair
Sweet smiles and bloom, less transient than her own."

COWPER.

I shall notice the allegorical allusions, which the eastern nations are accustomed to make by means of flowers, and the fables of the ancient poets and mythologists respecting plants. Thus pleasing ideas may be connected with pleasing objects, and agreeable images convey lively but moral sentiments to the mind, adding to the charms of the country without recourse to romance or useless fiction. These accustom the mind to such violent sensations, that at last it is obliged to resort to an excess of feeling, either of mirth or grief, to prevent that dreaded fashionable lethargy of spirit—*ennui*. Such a habit in the end injures health and consequently shortens life, but a calm and cheerful mind assists in the prolongation and enjoyment of both:

"Come then ye blissful scenes, ye soft retreats.
Where life flows pure, the heart more calmly beats."

DELILLE.

It would seem, that the more terrible a sight, and the more violent an impression, the more agreeable to the great portion of mankind, who run with avidity after objects of horror, whilst they pass unnoticed those which produce gentle and agreeable sensations, and would to all appearance rather tremble at the awful thunderbolt of Jupiter, than calmly admire the beauteous horn of plenty. It has been observed that the Volcano near Naples attracts more travellers to the city, than the delicious

gardens, which adorns the shores of that region. The plains of Greece, overspread with ruins, would entice many to undertake a voyage to a distant country, who would feel but little inclined to travel over their native soil to view its richly cultivated lawns; and there is no doubt, but that formerly, where one person went to Egypt to be a witness of Nature's bounty to that nation, five hundred became travellers to behold Pyramids. A temple after its fall excites more eager curiosity than it did during its construction; and many who will not cross their thresholds to look at a beautiful calm in Nature, will rush to get a sight of a storm and shipwreck in a playhouse. This love of the terrific is not as has been asserted by foreigners, peculiar to the English nation: it is prevalent every where. The author observed an instance of it when in Paris, in the summer of 1822. Wishing to visit the celebrated garden of M. Bourseau, unequalled for the beauty of its plants by any city-garden in Europe, he received in answer to all enquiries for direction to the spot, the usual careless but short and decisive, *Je ne le connois pas, Monsieur*; but on asking the way to *La Mort*, every turn and alley were readily pointed out with all the bustle and officiousness of French politeness.

In this history of flowering trees and shrubs, there is nothing terrible to present to the reader; but every endeavour has been used to

“ Shew Nature's form in smiling beauty drest
And call mankind to view her and be blest.”

DELILLE.

It seems hardly possible for any mind to be so debased as to be insensible to the effects of Nature, whose vegetable charms become more endeared to us as our age and reflection increase. A more delightful cabinet of natural history can scarcely be formed, than the shrubbery affords, even when unadorned with exotic beauties. It offers matter for contemplation of the most agreeable kind which varies still as seasons revolve; and as every tree and shrub has its peculiar inhabitants, we have at the same time a collection of animal and vegetable wonders, that are sufficient to occupy all the leisure which our economical duties allow us. As years increase, a taste for most pleasures in general diminishes. Those of the court become fatiguing; the charms of the table appear to lessen; and as passion subsides and love languishes,

the gay ball and splendid opera lose their delights ; but the fondness for a garden increases, and is almost the only earthly pleasure that does increase. Let us not, then, neglect to cultivate a taste for what will form the delight and amusement of the latter period of life. Every tree we plant adds to the entertainment we prepare for future years, for ourselves, our friends and successors.

Should particular times and circumstances require a retrenchment to be made in domestic expences, it should not begin with the garden. This once neglected or laid aside cannot soon or with small cost be re-established. There are other more expensive and less profitable indulgences, which may be lessened without injury ; nay, perhaps, with benefit to an establishment. By giving one entertainment less each season in London, more might be saved than by ruining a whole pleasure ground, the only means of subsistence to a few labourers, whose consequent discharge exposes them to want, and all the evil that accompany it.

The introduction of a useful or an ornamental plant into our island is justly considered as one of the most important services that a person can render his country ; for it is impossible to calculate on the benefits that may be derived through his means, when the qualities of the vegetable are ascertained and its virtues known. Even what is introduced and planted merely from curiosity or ornament seems to unite us to the nations from whence it comes. It bestows on us a share of the blessings of other climates, and affords us a portion of the smiles of a more genial sun. When, therefore, we dwell on the beauty of exotic trees and shrubs, we wish to be understood as expressing our gratitude to those who have enriched our land with additional charms, and more fully displayed Nature to our eyes, and not as disregarding the plants that are indigenous to our soil. I am aware that many an Englishman has sighed under the shade of the banana, for a sight of his native banks, where the primrose sparkles through the hazel-hedge, and the violet peeps so modestly. The plants of our country recall the idea of it in the most forcible manner, wherever we meet them. They are often the first object that attract the attention of those who have been long absent from their native fields, and who on their return pour out the genuine effusions of joy on beholding the village-elm, the well known oak or the unchanged yew, whose antiquity is equal to the church it shades. We are told of a young Indian Pontaveri, (from Ota-

heite,) who in the midst of the splendour of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a banana tree in the Jardin des Plantes, embraced it, while his eyes were bathed in tears, and exclaiming with a voice of joy, "Ah! tree of my country!" seemed, by a delightful illusion of sensibility, to imagine himself for a moment transported to the land which gave him birth.

We seem as it were for an instant to go back to the delights of infancy, when, on each succeeding spring, we visit the meadows covered with cowslips, which afforded us so many happy hours in childhood, as we formed balls of their blossoms. Then the playful girl, bedecked with wreaths and necklaces of daisies, led her little swain in chains formed of the milky flower stalks of the dandelion; but who at the sight of a butterfly burst the brittle bonds and scampered away, to return, perhaps, a few years after sighing, in fetters not so visible, but more binding.

There is no part of nature's works more interesting than flowers. They seem intended for the embellishment of the fair, and for the ornament of the spot where they tread. Their sweet perfumes have such influence over all our sensations, that in the midst of flowering shrubs the most acute grief generally gives way to sweetest melancholy. When our home and domestic companions are encompassed by the shrubbery, our situation approaches nearest to a terrestrial paradise. Is it not, then,

" Strange, there should be found,
Who, self-imprisoned in their proud saloons,
Renounce the odours of the open field,
For the unscented fictions of the loom;
Who, satisfied only with penciled scenes,
Prefer, to the performance of a God,
Th' inferior wonders of an artist's hand?
Lovely, indeed, the mimic works of art;
But Nature's works far lovelier."

COWPER.

The shrubbery is to a rational mind a source of inexhaustible delight and instruction, where each season brings new joy, and every morning a fresh harvest of delightful sweets. Subjects for new thoughts and contemplations prevent themselves to our view, and even the most dreary months still supply cause of admiration, and discover a world full of wonders; for,

" E'en Winter oft has seen it gay,
 With fretted frost-work, spangled o'er,
 While pendants drooped from every spray,
 And crimson bodlets told, once more
 That spring would all its charms restore."

It is not to old age alone, that the garden offers its placid delights. Every stage of life from the cradle to the grave is attracted by its charms. The infant is ready to spring from its nurse's arms, allured by the gay colours which flowers exhibit.

They form the most innocent toy of childhood, and the cultivation of them is generally its first labour, whilst their presentation often explains the passion of youth. The happy belle loves to entwine them in her locks, and the fond parents delight to see their child mimic their beauties with the pencil;

" The flowers that grace their native beds,
 Awhile put forth their blushing heads ;
 But e're the close of parting day,
 They wither, shrink, and die away ;
 But these, which mimic skill hath made,
 Nor scorched by suns, nor killed by shade,
 Shall blush with less unconstant hue,
 Which art at pleasure can renew."

The representation of flowers is the proper style of drawing for the softer sex. In this attempt they will succeed, and by this study will afford us delight which they cannot do, " when, o'erstepping the modesty of nature," and the limits of their proper employment, they present us with specimens of their proficiency in the science of anatomy. A pursuit like this is often too bold, and the subjects sometimes too masculine to suit the feeling of the other sex. But flowers are the peculiar province of the fair, and the nearer their imitation approaches to nature, the more it delights us ; which paintings of murders, massacres, deaths, and agony, certainly cannot. The beauty and grace that may be displayed in grouping flowers, united with the gaiety of their colours and the harmony of their tints, are well worthy the attention of those who were born to render life delightful. The neatness, nicety, and patience required in finishing flower-pieces, seem to demand the delicate hand of a female artist.

The description, by Moses, of the garden of Eden, the first abode of first created man, formed the outlines which Milton has so splendidly enriched with all the imagery of poetry. From

this have been copied the plantation, the park, and shrubbery, so justly the pride of the nation, and so properly the abode of its beauty. The Greeks devoted their terrestrial groves, as well as their celestial gardens, to the gods ; but the Mahometans reserve their flowery lawns and umbrageous bowers for scenes of future bliss to mortal believers. We, however, more prudent, should wish to collect all such blessings, which bounteous nature has scattered over the globe, and in this present life form a modern garden, worthy of the Hesperides, and deserving of, though not requiring a dragon to guard it.

Some of the pleasure gardens of antiquity were created for, and devoted to, the pleasure of the softer sex. Solomon has celebrated those of Jerusalem in song, and the extraordinary gardens of Babylon appear to have been formed by Nebuchadnezzar for his Median queen, who, we are told, could not become reconciled to the flat and naked appearance of the provinces of Babylon ; but frequently regretted each rising hill, and scattered forest which she had formerly delighted in, with all the charms they had presented to her youthful imagination. The king to gratify his consort, within the precincts of the city raised terraces and planted woods, in imitation of those that diversified the face of his queen's native country. Thus we are told originated those gardens, which for their singularity and comparative extent, were considered one of the wonders of the world. Their base covered four acres of land, and the height of them was so considerable that they resembled a pyramidal mountain covered by a forest. The upper area, which was about thirty feet square, was about three hundred feet distant from the river Euphrates, that washed the base of that stupendous superstructure,

This towering pleasure ground overlooked the whole city and surrounding country, as far as the eye could reach. Each terrace was covered with earth and planted with trees, so as to form a series of ascending groves : and every platform supported rural seats, fountains, and sumptuous banqueting rooms, on which all the splendour and luxury of eastern magnificence were lavished.

(To be continued.)

REVIEW.

The Rose Amateurs Guide. By T. RIVERS, Jun.

(Continued from p. 19.)

Rivers's George the Fourth is still, perhaps, one of the best of this family: it was raised from seed by myself, about twenty years ago, and contributed probably more than any thing to make me an enthusiastic rose cultivator. It is now much esteemed in France, where it is comparatively a new variety. Grilony is a new and fine rose, of a purplish slate colour, and first rate form and character. Hybride blanche is a hybrid noisette blooming in clusters, and a pretty neat white rose a little tinged with rose colour. Hypocrate is a most superb variety, one of the finest of its class, and well adapted for a show rose. The King of Roses, or Saudeur panachée, is a rarity among hybrids, for it is finely striped, and as yet so few variegated roses are in this class; till this season (1837) never has it bloomed in perfection, or in fact scarcely at all, owing to its having been pruned too much: like some few others mentioned, its branches may be thinned, but scarcely at all shortened; this rose will form a fine pillar, and a standard of the largest size, as it grows with extraordinary luxuriance and vigour. Legouve is a hybrid Bourbon Rose, and quite first rate in form and colour: this may be grown for a prize or show rose. Lady Stuart, like the Duke of Devonshire, is a gem of the first water, for no rose can surpass it in beauty; the form of the flowers before expansion is spherical, and exceedingly beautiful. This rose for some years to come, must and will be a favorite. La grandeur is, perhaps, nearly as much to be admired, but for qualities quite opposite, as this is when quite open an imbricated rose, exceedingly regular and pleasing in its form. Las Casas is a hybrid Bourbon of the most robust habit, producing very large flowers, nearly the colour and shape of the common cabbage rose. Lusseldembourg is a fine spherical-shaped rose: its flowers are of a bright rosy lilac, very beautiful and distinct. Madame de Goursac is a hybrid noisette, blooming in immense clusters, and forming a very pretty standard. Monteau and Miaulis are both good dark roses; but they are certainly surpassed by Miralba, which has recently been named Chevrier: this is not a large rose, but decidedly one of the most brilliant and beautiful dark crimson roses we possess. Moyena, a bright purplish rose, has flowers very double and finely shaped; it will prove a good show rose. Ne Plus Ultra, the Palagi of two or three rose cultivators, and Called also Gloire des Hybrides, is now an established favorite. Like many others of this division it is not at all adapted for a show rose; its flowers resemble in colour the red stock and are singularly brilliant.

Princess Augusta is an English rose, a vigorous grower, and well adapted either for a pillar rose or a standard. Petit Pierre is one of those rapid and diffuse growing roses, like Belle Parabere and the King of Roses in luxuriance and vigour of growth; this is one of the largest and the most double of hybrids, and when grown as a standard, forms a magnificent tree. Pompone bicolor is rather a small, but well shaped rose, its centre inclining to scarlet, with outer petals of fine crimson purple, a most distinct and desirable rose. Reine de Belgique rivals Lady Stuart in the fine and perfect shape of its flowers; this rose has been sold for Reine des Belges, a hybrid Provence: but, as that is of the finest white, and this of a rosy lilac, the cheat is soon detected. Riego is between the China rose and the sweet briar, a remarkable, but most pleasing union, as it has the most delicious perfume. Rosine Dupont is a very pale flesh coloured rose, with remarkable glossy foliage, and erect growth, very distinct and pretty. Saphirine is one of the largest

globular roses known, and most astonishingly robust and vigorous in its habit: in a very few years, in a strong soil, this rose would form a tree of the largest size. *Souvenir d'une Mere* is a large rose, of that delicate but bright rose-colour, always so much admired. Its flowers are not so double as some other varieties; but very large and magnificent. *Triomphe de Laffay* is a beautiful rose, not of a pure white, but rather what is called French white, the outer petals inclined to rose colour. *Triomphe de Guerin*, a very large pale rose: much resembles *Lady Stuart*, differing only in having the centre of its flowers of a warm rose coloured tint: this is a most beautiful and distinct variety. *Triomphe d'Angers* is perfectly unique and no rose can be more deserving of admiration. Its perfume is much like ripe fruit, and its singularly brilliant crimson flowers are often striped with white; these two last mentioned varieties are finer grown as standards than in any other mode, as their flowers are large and pendulous. *Titus* is a remarkably pretty purple rose, blooming in large clusters. Its flowers are not large but finely shaped and very distinct. *Victor Hugo*, one of the finest of the lilac coloured roses, deserves a place in every collection. It produces flowers of the very largest size, globular, and finely shaped. This is a very erect growing rose, and may be cultivated either as a standard or a dwarf. *Velours Episcopal* is a new and beautiful variety, perfectly globular of a fine crimson purple, inclining to the latter colour. *Wellington* is now an old rose: for some time thought to be the same as *Bizarre de la Chine*, but now found to be quite different in its habit and growth, though its flowers have an exact resemblance.

With but few exceptions hybrid China roses may be cultivated as standards to advantage, as their growth is luxuriant and umbrageous; some of the most robust growing varieties forming immense heads. To keep them in a healthy state, lay round their stems, on the surface of the soil, in winter, a good proportion of manure; and mind that before the blooming season commences this is added to, as they require the surface of the soil moist when in flower; they will also continue much longer in bloom if this is attended to. The great objection to this summer surface manuring, with English gardeners, is its unsightly appearance, particularly round trees on well dressed lawns; this may be soon obviated, by covering the manure with some green moss: and to keep the birds from disturbing it, which they will do after worms, place on the moss some pieces of rock, or flints, thus forming an ornamental mound. In France, roses are cultivated with much and well rewarded care; for even standards of thirty years growth have, every spring a large quantity of manure laid on the surface round their stems. This keeps the extreme heat of the sun from penetrating to their roots; and as they are abundantly watered in hot weather, it also prevents that rapid evaporation which would otherwise take place, so often rendering watering useless; this practice after all is only imitating nature, for the Dog Rose, upon which all the fine varieties are grafted, grows naturally in woods and shady places; consequently, it is impatient of exposure in hot, dry soils and situations.

For rose beds on lawns, the roses of this division are finely adapted, as they form such a mass of foliage and flowers. They may also be formed into a regular bank, rising gradually from the edge, by having dwarfs of different heights, and "petites tiges," or dwarf standards in the back ground. They bloom remarkably fine on these little stems, and as the stem is protected from the sun by the branches of the plant, it increases in thickness, much faster than when taller: tall stems owing to exposure, are apt to become bark bound and unhealthy, increasing but slowly in girth, and often requiring support. To have hybrid China roses in perfection as pillar roses, they require attention, and a superabundance of manure; but they will amply repay it, for a column twelve to twenty feet high, covered with such roses as *Brennus*, *Blairii*, *Belle Parabere*, *Coccinea superba*, *Fulgens*, *Fimbriata*, *General Lamarque*, *George the Fourth*, *King of Roses*, *Petit Pierre*, or *Triomphe d'Angers*, &c. &c., would be one of the finest garden ornaments

it is possible to conceive. To make these varieties grow with the necessary luxuriance, each plant should have a circle three or four feet in diameter to itself, and if the soil is poor, it should be dug out two feet in depth, and filled up with rotten manure and loam. This compost must be laid considerably (say two feet) above the surface of the surrounding soil, so as to allow for settling: in shallow or wet soils, they will grow the better for being on a permanent mound. Plant a single plant in the centre of this mound, or, if you wish for a variegated pillar, plant two plants in the same hole, the one a pale colour or white, the other a dark variety: cover the surface with manure, and replenish this as soon as it is drawn in by the worms or washed in by the rains. Water with liquid manure in dry weather, and probably you will have shoots eight or ten feet in length. I scarcely know whether to recommend grafted roses on short stems for this purpose, or plants on their own roots; this will, in a great measure depend upon the soil, and perhaps, it will be as well to try both. Most roses acquire additional vigour, by being worked on the Dog Rose; but some of the robust varieties of this family grow with equal luxuriance when on their own roots; finally, for dry and sandy soils, I am inclined to recommend the latter.

THE AUTUMNAL ROSE GARDEN.

To Autumnal Roses we are much indebted for that prolonged season of interest which this "Queen of flowers," now gives. The roses of June, however splendid, soon fade; but some perpetual, or Noisette, or Bourbon roses enrich our gardens with their perfume and gay colours, till the chills of approaching winter prevent the expansion of their flowers. Among the most fragrant of these autumnal beauties are

PERPETUAL ROSES.—This division has as much variety in its origin as in its appearance: it would, indeed, be a difficult task to trace the parentage of some of the justly esteemed varieties of this family. Our old red and white monthly roses have, no doubt, contributed their share of sweet assistance; for, in many of them, the powerful fragrance of the two very old damask roses is apparent, and no perfume can be more pleasing.

In preference to giving a slight history of the family at the commencement, I shall, as I describe them, at the risk of being tedious, give the supposed origin of most of the varieties; premising, that all those termed true perpetuals have, generally, a terminal cluster of buds at the end of each shoot, whether produced in spring, summer, or autumn.

Antinous is a new rose, evidently between the French Rose and Crimson Perpetual, equalling that fine rose in form and fragrance, and surpassing it in beauty of colouring: but it partakes rather more than it ought to do of the French Rose, as it is not a true Perpetual. However, as it often puts forth its fine crimson purple flowers in September, it will be much esteemed, as we have hitherto been accustomed to roses of more sober hues in that pleasant month. Billiard, so named from a French rose amateur, is a pretty bright rose, very fragrant and double, and a True Perpetual. Belle Italienne approaches very near to the Crimson Perpetual, except that its flowers are larger, and not quite so double: this is also a True Perpetual. Bernard, or Pompon Perpetual, is a most beautiful new rose, with rather small flowers; but these are very double, and finely shaped, of a delicate carmine colour: this is a True Perpetual, and a most desirable rose.

The Crimson Perpetual, Rose du Roi, or Lee's Crimson Perpetual, deserves a few extra words of comment. This fine rose was raised from seed, in 1812, in the gardens of the palace of Saint Cloud, then under the direction of Le Comte Lellieur, and named by him Rose du Roi; owing, I suppose, to Louis the Eighteenth soon after being restored, and presenting an opportunity for the Comte to show his loyalty: it is not recorded that he changed its name during the hundred days, to Rose de l'Empereur. It is asserted, that it was raised from the Rosa Portlandica, a semi-double bright-

coloured rose, much like the rose known in this country as the *Scarlet Four Seasons*, or *Rosa Pæstana*; which Eustace tells us, in his *Classical Tour*, grows among the ruins of *Pæstum*, enlivening them with its brilliant autumnal flowers. This is treated as a traveller's tale by one or two of our English botanists, and the *Rosa Pæstana* is said to have been originated from seed in England:—but was that seed from Italy?

Every gentleman's garden ought to have a large bed of *Crimson Perpetual Roses*, to furnish bouquets during August, September, and October; their fragrance is so delightful, their colour so rich, and their form so perfect.

Couronne de Beranger is a purplish rose, very double, and of good shape; a *True Perpetual*. *Crispata*, or the *Curled Perpetual*, is one of those whimsies of nature, more curious than pretty. Each leaf is curled, and forms a ring, giving an odd appearance to the plant. *De Neuilly* is a hybrid *Bourbon* of great excellence, having all the peculiar beauty of the *Bourbon Roses*, with the fragrance of the *Damask Rose*. It is a most abundant autumnal bloomer, and ought to be extensively cultivated. *De Rennes* is a *True Perpetual*, of a first rate excellence, with large and very double flowers. *Délíce d'Hiver* is a splendid rose, with large and finely-shaped flowers, of that vivid rose-colour so much admired; also a *True Perpetual*. *Désespoir des Amateurs*, or *Perpetuatissima*, had its origin in Italy, from whence it was ushered into France, with its high-sounding names, equally ridiculous; for, in reality, the rose, though pretty, and fragrant, is much below many in this division. It is a hybrid of uncertain origin, and totally unlike any other rose in habit, which is dwarf, and rather delicate.

Ernestine Audio is a new and fine variety, with large and very double flowers, of a bright rose-colour. I have not yet been able to decide whether or not this is a *True Perpetual*.

Flon, *Gloire des Perpetuelles*, and *La Mienne*, are roses of the same race, or breed, and have the same leading features differing only, and that but little, in the size of their flowers. They are all *True Perpetuals*, and abundant bloomers, with a peculiar and pretty habit; for their foliage has a soft appearance; and, when the plants are covered with their brilliant red flowers, no *Perpetual Roses* are more beautiful. *Ferox* is quite unique, and very magnificent, having larger flowers than any other in this division; but it is not a certain autumnal bloomer. The *White Four Seasons* has an attractive name, but it does not deserve it, as it has not the habit of the *True Four Seasons Rose*, producing constantly terminal flower-buds, but more like the *Common White Damask*, from which it is but little removed. The *Grand Perpetual*, or *Fabert's*, is a *True Perpetual Rose* of great excellence, requiring a rich soil and good culture to bloom in perfection. It has one great fault,—the flowers produced in July are so large that they almost invariably burst, but its autumnal flowers are so much more symmetrical. *Grand et Belle*, or *Monstreuse*, is a rose of immense size and beauty, and generally, a good and *True Perpetual*. *Henriette Boulogne* is a good rose, but rather an inconstant autumnal bloomer. This, with some others, the French distinguish as roses that “remontante rarement,” in contradistinction to the *True Perpetuals*, which they say, “remontante franchement.” *Jean Hachette* is a most immense rose, and very double, but not a *True Perpetual*. *Jenny Audio* is a new and rare rose, not remarkable for any peculiar beauty, but fragrant, and a *True Perpetual*. *Josephine Antoinette* is now an old variety, but a *True Perpetual* of great excellence. *Louis Philippe*, being introduced before *Antinous*, has had a large share of admiration: its immense size, under proper cultivation, and its dark purple colour, make it even yet desirable; it is also a *True Perpetual*. *Lodoiska* and *Madame Feburier* are superb roses, and very large and double; but they are rather *Inconstant Perpetuals*. *Marie Denise* is a fine robust variety: its flowers resemble those of *Lodoiska*, but more double, and the plant approaches nearer to a *True Perpetual* than that fine rose. *Pompon Four Seasons* is a very old rose, as its name may be found in many old catalogues; still it is rare, and quite a gem, as it blooms well in autumn, and forms a pretty little bush.

PART II.

LIST OF NEW AND RARE PLANTS,

Noticea since our last.

1. CATTLEYA PERRINII.
- Mr. Perrins Catleya.*
- [Bot. Reg. 2.]

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

This beautiful flowering species is a native of Brazil, and bloomed for the first time in this country, in the fine collection of R. Harrison, Esq., near Liverpool, and the species is named in compliment to Mr. Perrin, the intelligent and skilful gardener to that Gentleman. Each flower is about four inches across, the petals are of a beautiful rosy lilac colour. The labellum is of a very pale bluish purple, with white and yellow; a large portion of its end of a deep mulberry crimson.

2. CYNOCHEs VENTRICOSUS.
- Ventricose.*
- [Botanist.]

ORCHIDACEÆ. GYNANDRIA MONOGYNIA.

Mr. Skinner discovered this interesting species in Guatamala, and sent it in 1822 to James Bateman, Esq., Kynpersley Hall. The genus is remarkable for the flowers having a striking resemblance to a swan when the flowers are held in a reverse direction to that in which they are produced. The flowers are produced on a raceme, each having five or six. Each flower is about five inches across, of a greenish yellow colour. *Cynoches*, from *Kuknos*, a swan; and *auchen*, a neck; in allusion to the graceful curve of the column of the flower, which resembles a swan's neck.

3. DRIMONIA BICOLOR.
- Two coloured (leaves) Woodwort*
- (Bot. Reg. 4.)

GESNERIACEÆ. DIDYNAMIA ANGIOSPERMIA.

The plant is a native of the West Indies, where, like the ivy in our own country, it runs up the trunks of trees, or spreads upon the ground. It requires to be grown in the hot house, and is admirably adapted for running up a pillar, or covering a wall in such a shady situation as other plants will scarcely grow in; it flourishes best when the wall is rather damp. The foliage is large, the upper side of a dark green, but at lower of a fine purple. The flowers are produced solitary, at the angles of the leaves. The flower has the form a *Gloxinia*, and about the size of *G. superba*, it is of a whitish yellow colour. The plant has bloomed in the collection of Mr. Knight, King's Road, Chelsea, and is sold at a low price. It is of very easy culture. *Drymonia*, from *drumonia*, woodland; referring to the situation it inhabits.

- 4 ECHINOCACTUS TUBIFLORUS.
- Tube flowered Spine-cactus*
- (Bot. Mag. 3627.)

CACTEÆ, ICOSANDRIA MONOGYNIA.

Mr. F. Mackie of the Norwich Nursery, who purchased this species among others in Mr. Hitchins's fine collection. The stem is subglobose, much depressed, and deeply cut into eleven prominent angles, having bundles of about eight blackish spines, nearly three quarters of an inch long. The flower tube is six inches long, the petals spreading at its mouth five inches, and of a delicate white.

Vol. VI. No. 60.

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5 EPIDENDRUM PAPILLOSUM. *Warty fruited.* (Bot. Mag. 3631.

ORCHIDÆ, GYNANDRIA MONANDRIA.

Mr. Skinner discovered this interesting species, and introduced it to R. Bateman, Esq., in whose rich collection it has bloomed. The scape grows a foot long, and the flowers are produced on a terminal raceme, of from eight to ten upon each. The sepal is of a yellowish green, column the same colour but tipped with orange; lip, white with three rosy pink stripes. Each flower is near two inches across.

6. MAXILLARIA AUREO FULVA. *Golden brown.* (Bot. Mag. 3629

MAXILLARIA. ORCHIDÆ, GYNANDRIA MONANDRIA.

Sent to this country from Rio. The scape rises about two inches high bearing a raceme of several flowers, of a fine golden brown colour, the points of the petals being lightest. Each flower is rather more than an inch long.

7 MIMULUS ROSEO CARDINALIS. *Hodson's hybrid Mimulis.*

This fine variety was raised by Mr. Hodson, in the Botanic Garden, Bury St. Edmunds, and is intermediate between *M. cardinalis* and *M. roseus*. The habit of the plant is that of the former, but the flowers of the latter; they are however of a deeper rose colour, and twice size of the *M. roseus*. It is a very pretty variety, and well worth cultivating. *Mimulus* from *mimo*, a monkey; alluding to the seeds resembling the face of this animal.

8, RONDELETIA ODORATA. *Sweet scented.* (Botanist.

RUBIACÆ. PENTANDRIA MONOGYNIA.

A native of Cuba, found near the town of Havannah, on bush covered rocks near the sea. The plant was sent in 1830 to Messrs. Loddiges. It has since bloomed in many hot house collections of plants. The present species is shrubby growing four or five feet high. The flowers are produced in a terminal panicle, each having from twelve to twenty blossoms, which are of a rosy red colour, having an orange coloured eye. Each blossom is near half an inch across. The plant is a profuse bloomer, and continues to bloom for several months. In its native situation, the flowers are fragrant, but in this country they emit but a slight odour. The plant is well worth a place in the hot house. *Rondeletia* in compliment to G. Rondelet a physician, and Author of Works on Fishes and Algæ.

9. STANHOPEA QUADRICORNIS. *Four horned.* (Bot. Reg. 5

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

S. Rucker, Esq. of Wandsworth, received this species from the Spanish Main. It is a very handsome flowering species, the flowers are much like those of *S. oculata*, but not near so much spotted. The plant has very much the appearance of *S. grandiflora*. The scape bears three or four flowers. Each blossom is about five inches across, sepals, yellow spotted with red. Labellum, at its base rosy crimson, then greenish white, terminating at the point with yellow. It is a fine flowering species well meriting a place in every collection.

10 TWEEDIA VERSICOLOR. *Changeable flowered.* (Bot. Mag. 3630.

ASCLEPIDACEÆ. PENTANDRIA DIGYNIA.

A very beautiful flowering Asclepiadaceous plant, which was discovered by Mr. Tweedie, and is most likely a native of Tucuma. It has bloomed in the Glasnevin Botanic Garden, Dublin. The plant is herbaceous, twining. The flowers are produced in long spikes, on numerous lateral peduncles,

each peduncle having an umbel of three or four flowers. Each blossom is about an inch across. When it first expands it is of a pale blue slightly tinged with green, then purplish, and when shrivelling, turns lilac. It is a very interesting species, highly deserving a place in every collection. Tweedia in compliment to Mr. James Tweedie, an intelligent and industrious collector of plants in Buenos Ayres, Tucuman, and Brazil, who has introduced into this country many highly interesting plants,

11. *ANÆCTOCHILUS SETACEUS*. *Fringed flowered*. [Bot. Reg. 1016

ORCHIDACEÆ, GYNANDRIA, MONANDRIA

This newly introduced terrestrial orchideous plant, is a native of Ceylon, and Java too, from whence it was sent to the Duke of Northumberland at Sion Gardens, where it has recently bloomed. The plant has much the appearance of *Goodyera discolor*, excepting the leaves, which are streaked with golden veins, instead of white. The flower stems are similarly produced to those of *G. discolor*, but its blossoms are white and green with a small streak of rose on the labellum. *Anæctochilus*, from *anikros*, open, and *cheilos* a lip, alluding to the spreading open of the lip.

12. *CHRYSOCOMA SQUAMATA*. *Scaly stalked Goldyllocks* [Bot. Mag. 3625

COMPOSITE. SYNGENESIA ÆQUALIS.

A pretty perennial fruticose plant, a native of Van Dieman's Land, and seeds of it were sent from thence by Ronald Gun, Esq. to the Glasgow Botanic Garden. The stem is much branched, and towards the base is of a red-brown colour, and are very downy. The flowers are produced at the ends of the branches, one upon each, of a pretty yellow colour. Each flower is about an inch across. It flourishes freely in the greenhouse, blooming most of the summer, and is of easy propagation by cuttings or slips. *Chrysocoma* from *chrusos*, gold; and *kome* hair, referring to the golden heads of the flowers.

13 *DODECATHEON INTEGRIFOLIUM*. *Entire leaved American Cowslip*. (Bot. Mag. 3622.

PRIMULACEÆ. PENTANDRIA MONOGYNIA.

This is a very distinct and handsome flowering species, which grows abundantly in the woody country of British North America. Mr. Drummond sent seeds of it to the Edinburgh, and Glasgow Botanic Gardens, where the plant has bloomed. The flower scape rises about nine inches high, and supports an umbel of ten or twelve drooping flowers, each blossom is near an inch long, of a rosy purple, with a yellow and white ring at the base. There are two other new species discovered one is *D. frigidum*, and the other not yet named. *Dodecatheon* so named in allusion to the number of blossoms, frequently twelve, which it bears in one head.

14 *JASMINUM GLAUCUM*. *Privet-leaved Jasmine*. (Bot. Reg. 2013.

JASMINACEÆ. DIANDRIA MONOGYNIA.

A native of the Cape of Good Hope. It has been introduced into this Country some years, but it has not been merited as it deserves. The plant is of neat growth rising to the height of four or five feet, and from the flexibility of the branches, the plant is peculiarly adapted for training around a trellis of wire work, &c. It flowers very profusely, the blossoms are white, and very fragrant. Each blossom is about three quarters of an inch across. It is a hardy greenhouse plant flowering nearly all the spring and summer.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A LIST OF FLOWERING SHRUBS AND ORNAMENTAL TREES.—You would much oblige a Subscriber and Old Correspondent, by obtaining through the medium of your Work, the following information—a list of flowering shrubs and ornamental trees, best calculated “to face up” a shrubbery, with some idea of their price, where a good selection can be obtained, and particularizing such as thrive best on a chalky soil.

ON A LIST OF STOVE AND GREENHOUSE PLANTS, &c.—A subscriber wishes also that you would mention (when better things are not abundant) the names of a few stove and greenhouse plants, that, like the *Thunbergia*, do best in bog, (not peat) soil, and whether you have tried the experiment of mixing old tan with the mould given to the *Hoya carnosa*, and with what success. Perhaps, also, through the same medium you would inform him from whence that sharp white sand is procured, and at what price, in tolerable quantities, which is so necessary for the propagation of cuttings, &c.

It may be obtained at one penny per pound of most greasers, or iron-mongers. If a large quantity be desired it might be procured much cheaper from Dover or Brighton, and facilities for its cheap conveyance are afforded by water.—CONDUCTOR.

ON STOVE AQUATIC PLANTS.—A subscriber would be obliged if some additional remarks (for the subject has been treated of before but not much at length) were given on the cultivation of, and soil for stove aquatics.

ON TULIPS.—A constant reader of the Cabinet wishes to ask some of the experienced Tulip fancier's, whether all the flowers broke from the same breeders take the same name with the first that was broken, or are they merely reckoned as different strains of the same flower. Is it the case that they are sometimes altogether different flowers. Having this season planted some celebrated named breeders, I am anxious to be informed as to this point, perhaps Mr. Groom would have the kindness to set me right in this respect, which would be esteemed a great favour by

Lincolnshire, Jan. 1838.

AN ENTHUSIASTIC TULIP GROWER.

REMARKS.

MEETINGS TO BE HELD IN FEBRUARY IN LONDON.—Botanical Society, held in Newman street, on Thursday, Feb. 1st.

Linnæan Society, held in Soho Square on Tuesday, Feb. 6th.

Horticultural Society, held at 21, Regent Street, ditto

Metropolitan Society of Florists and Amateurs ditto

Royal Society of Horticulture, held at the Egyptian Hall, Piccadilly, on Saturday, Feb. 10th

Medico-Botanical Society held at 32, Sackville Street, on Wednesday Feb. 14th.

Botanical Society held on Thursday, Feb. 15th.

Linnæan Society, held on Tuesday, Feb. 20th.

Horticultural Society ditto

Metropolitan Society ditto

Medico-Botanical Society, held on Wednesday, Feb. 28th.

NEW PLANTS.

Bignonia grandiflora. This very fine new species we saw at Mr. Lowe's of the Clapton Nursery. The leaves have a noble appearance, each being ten inches long, and proportionably broad. We could not ascertain anything respecting its blossoms, but if they correspond with the foliage, in such an increased proportion over any other species we have seen, it will be a plant of extraordinary beauty. Mr. Lowe has not got plants for sale.

Clematis azurea grandiflora. This is an improvement upon that truly beautiful species we noticed on a former occasion, and gave a figure of it in December 1836. This new kind Mr. Lowe does not yet offer for sale.

Campanula verbenæfolia. We noticed this new and beautiful species too, at the Clapton Nursery, and we understand it is a native of Japan. It produces its flowers in spikes, which are of a very handsome light blue colour. Mr. Lowe will have plants for sale next spring.

Aralia japonica. This is a singularly pretty plant, it bears a fine foliage which is very spiny on the upper surface, and produces a striking appearance.

Anigozanthus coccinea. This is new, and we were informed that it is very handsome, it is most probably a greenhouse plant, but we forgot to ask the question. Mr. Lowe will have plants for sale next season.

Deutzia corymbosa. Mr. Lowe has plenty of plants for sale of this new species, it had not yet bloomed at the Clapton Nursery, and we could not obtain any information respecting its flowers, but if the blossoms be as pretty as the *D. scabra*, being produced in corymbs, they will have a pretty appearance.

Clematis hederatifolia. Mr. Lowe has got another addition to this justly admired genus, the foliage is singular when compared with the other kinds, we have seen. Of the flowers we could not obtain any information. This new species is not yet offered for sale.

Echium simplex. This very pretty species of Bugloss, Mr. Lowe possesses. The flowers are white and produced in spikes, having a neat appearance. It is a greenhouse species we understand.

Correa rufa. This is a new and fine greenhouse plant from Van Dieman's Land, being discovered on Mount Wellington. The flowers are said to be very handsome, viz. sulphur, orange, and green. It is a valuable acquisition for the greenhouse. Mr. Lowe will have plants for sale next season.

Clematis montana. Messrs. Rollinson of Tooting Nursery, possess this new species. It was sent into this country by Lady Amherst having been obtained from the Indian Himaylayan mountains. The flowers are white.

Gladiolus ramosus. Mr. Groom of Walworth, had fine plants in bloom of this splendid flowering species, which grow freely in the open border. The flowers are produced in large spikes, each blossom is three inches or more in length, of a fine rosy red colour, having a white stripe up each petal. It deserves a place in every flower garden.

Cytisus filipes. Mr. Lowe possesses this new species, it is a handsome greenhouse plant, producing numerous spikes of white flowers: when grown in contrast with the old yellow flowering species, it will produce a pretty effect.

Lobelia corymbosa. Mr. Young of the Epsom Nursery, possesses plants of this new and interesting species, the flowers are white, having rose coloured spots interspersed, and being produced in corymbose heads, have a pretty effect.

Alstræmeria acutifolia, and *A. hirtella*. We saw plants of these two fine species growing against a south aspected wall, in Mr. Young's, Ephom Nursery, which under his skilful management had, in one season we understood, reached the height of nine feet, having numerous branches, and bearing a vast profusion of flowers. The appearance was most beautiful, and the plan deserves a trial in every flower garden possessing the advantages.

Primula sinensis. Mr. Henderson of Pine Apple Nursery, has two varieties of Chinese Primrose with double blossoms, one has flowers of a cream colour, the other is of a pale rosy lilac colour; both kinds are very pretty.

Ipomea Nova spec. We have had plants of a new species in our possession for some time, but it has not bloomed with us yet. It was sent us as being a new species of *Rhodochiton*. We observed plants of the same with Mr. Lowe, and Mr. Young, but it had not bloomed with those gentlemen, the former informed us it had recently flowered at Lady Grenvilles, Dropmore, and on enquiry we find it turns out to be a fine species of *Ipomea*, having flowers of a fine rose colour, and growing and blooming freely in the open air during the summer. The plant will doubtless be very ornamental to train against a wall, trellis, or other support, as wire frame work, &c.

A LIST OF ANNUAL FLOWERS.

We have recently endeavoured to obtain information from the various nurserymen and seedsmen, respecting the kinds of annuals which they now offer for sale, and we have arranged them under three divisions, viz. hardy halfhardy, and tender. We hope the lists will be useful to our readers, affording facilities in making a selection for any desirable period of the blooming, colour of flowers, height of the plant, &c.

HARDY.

- Bladder Kemia, 2 ft. yellow brown, June to September
- Blue Bottle, Cyanus, mixed, one foot and a half, divers, June to Sept.
- Candytuft, three-fourths of a foot, crimson, June to August
- Normandy, one foot, deep purple, June to August
- purple, one foot, purple, June to August
- purple tree, one foot, purple, ditto
- sweet scented, one foot, white, ditto
- Carthamus, Dyers' 3 ft. orange red, June to July
- Catchfly, Lobel's mixed, one foot, red and white June to August
- painted 2 ft. red ditto
- many-flowered, one foot, red ditto
- three-nerved, one foot, red ditto
- small red, one foot, red, ditto
- Chrysanthemum, quilled, 3ft. yellow, July to September
- white 3ft, white ditto
- tricolor one foot, various ditto
- new golden, one foot, yellow ditto
- Clary purple-topped, a foot and a half purple, June and July
- red topped, a foot and a half, red, June to September
- Clintonia pulchella, half a foot, blue and yellow
- Convolvulus minor, three colours, June to September
- two-coloured various ditto
- Sicilian, blue, ditto
- Flos Adonis, one foot, scarlet, July and August
- Hawkweed, red, one foot, June to August
- white variety, one foot, ditto
- yellow, one foot ditto
- silvery, one foot, white, ditto
- Larkspur, fine dwarf, one foot, divers colours, July and August.
- double dwarf blue, one foot, ditto

Larkspur double dwarf rose, one foot	ditto
double dwarf slate, one foot	ditto
double dwarf white, one foot	ditto
double dwarf unique, 1ft. various colours	ditto
fine double tall mixed a foot and a half, divers colours,	ditto
fine double blue. foot and a half	ditto
fine double rose, a foot and a half	ditto
fine double white, a foot and a half	ditto
fine double slate, a foot and a half	ditto
Larkspur, branching, mixed, a foot and a half divers colours,	ditto
fine double rose, a foot and a half	ditto
Lavatera white, 3ft, July to September	
red, 3ft.	ditto
Love lies bleeding, 3ft.	ditto
buff or white, 3ft	ditto
Lupines, large blue, 3ft.	ditto
Dutch blue. 2ft.	ditto
large rose, 3ft.	ditto
small blue, 2ft.	ditto
straw-coloured, 2ft.	ditto
white, 1ft.	ditto
yellow, 2ft.	ditto
Mallow, China, one foot. red and white, July and August	
Marigold, Cape, one foot, white and purple, June and August	
hybrid, large Cape, one foot, white	ditto
new double, 2ft, orange red	ditto
new scented, one foot, yellow, June to September	
(To be continued)	

REFERENCE TO THE EMBELLISHMENTS.

Arrana Verbena, Earl of Arran's Verbena. Mr. Tweedie sent seeds of this very fine species from Buenos Ayres to the Edinburgh and Dublin Botanic Gardens. The plant has bloomed at the latter place, from whence we received our drawing. It is said to be more shrubby than the lovely *V. Tweediana*, and when grown in contrast with the other species, will have a pretty effect. It has been named in compliment to the Earl of Arran.

Cosmos tenuifolius, slender leaved. This pretty flowering annual is a native of Mexico, blooming profusely when raised from seed in autumn and kept through the winter, which it can easily be done, either in a cool frame or greenhouse. It requires to be kept rather dry, the foliage being so fine is liable to damp off, and kill the plant. We have seen it do well when grown in good sized pots and kept as an ornament to the greenhouse during summer, and when good strong plants are turned out of pots early in May into the open border, such bloom well through the season. It forms a pretty contrast with *Calliopsis tinctoria*, &c. it being of a similar habit, and grows from two to two and half feet high.

Lisianthus Russellianus, Duke of Bedford's Lisianthus. Gentianese Pentandria Monogynia. A drawing of this very fine annual was sent us from Glasgow, the plant had recently bloomed in the greenhouse at the Botanic garden at that place, and from the representation given of it, it is one of the finest plants that have been lately introduced into this country. The blossoms are produced in terminal panicles, and being both large and numerous have a fine effect. It is a native of the Texas, from whence seeds were sent by the late Mr. Drummond. It is very probable that like other plants sent from the same country, that if seed be sown in autumn, and the plants be kept through the winter, then turned out into the open border in spring, that they would flourish abundantly through the summer. Or if sown early in spring and planted out in May, they might do well in the open border. The known liberality of the proprietors of the Glasgow Botanic Garden, will doubtless soon cause the plant to be offered to the public.

FLORICULTURAL CALENDAR FOR FEBRUARY.

GREENHOUSE.—This department should have good attendance during this month, similar in its operations to those directed in January, which see.—Oranges, Lemons, and Myrtles, &c. will require water frequently, they usually absorb much. The herbaceous kind of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. Air should be admitted at all times when the weather is favorable, or the plants cannot be kept in a healthy state. If any of the Orange, Lemon, or Myrtle trees, &c. have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity, by shortening the branches and head shoots, by this attention they will break out new shoots upon the old wood and form a regular head; be repotted in rich compost in April, reducing the old ball of earth carefully, and replacing with new soil. After shifting it would be of great use to the plants, if the convenience of a glass case could be had, in which to make a dung bed, that the pots might be plunged in this would cause the plants to shoot vigorously, both at the roots and tops. Repot *Amaryllis*, &c.

ANNUALS.—Towards the end of the month, sow most of the tender kinds which require the aid of a hot bed in raising.

ANOMALTHECA CRUENTA, the bulbs of should now be repotted into small pots, to prepare them for turning out into beds, so as to bloom early.

AURICULAS should now be top dressed, taking off old soil, an inch deep and replacing it with new.

BULBS as **HYACINTHS**, &c., grown in water glasses, require to be placed in an airy and light situation. The water will require to be changed every three or four days. The flower stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top.

CALCEOLARIAS, seeds of, should be sown during the month, and be placed in a hot bed frame.

CARNATIONS, layers should be transplanted into large pots towards the end of the month, or planted in the open border.

CUTTINGS OF SALVIAS, FUCHSIAS, HELIOTROPES, &c., desired for planting out in borders or beds during spring or summer, should now be struck in moist heat, in order to get the plants tolerably strong by May, the season of planting out.

DAHLIAS.—Seed should be sown either in pots or upon a hot bed. Pots or boxes with seed placed in a warm room, near light, and admitting plenty of air to the plants when up, will succeed well. Dahlia roots should now be potted or be partly plunged into a little old tan in the stove, or a frame to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat.

HERBACEOUS PERENNIALS, BIENNIALS, &c.—May be divided about the end of the month, and planted out where required.

HYDRANGEAS.—Cuttings of the end of the last years wood, that possess plump buds at their ends, should now be struck in moist heat; plant one cutting in a small pot (60's). When struck root, and the pot is full of roots, repot them into larger; such plants make singularly fine objects during summer.

MIGNIONETTE, to bloom early in boxes, or pots, or to turn out in the open borders, should now be sown.

RANUNCULUSES should be planted by the end of the month.

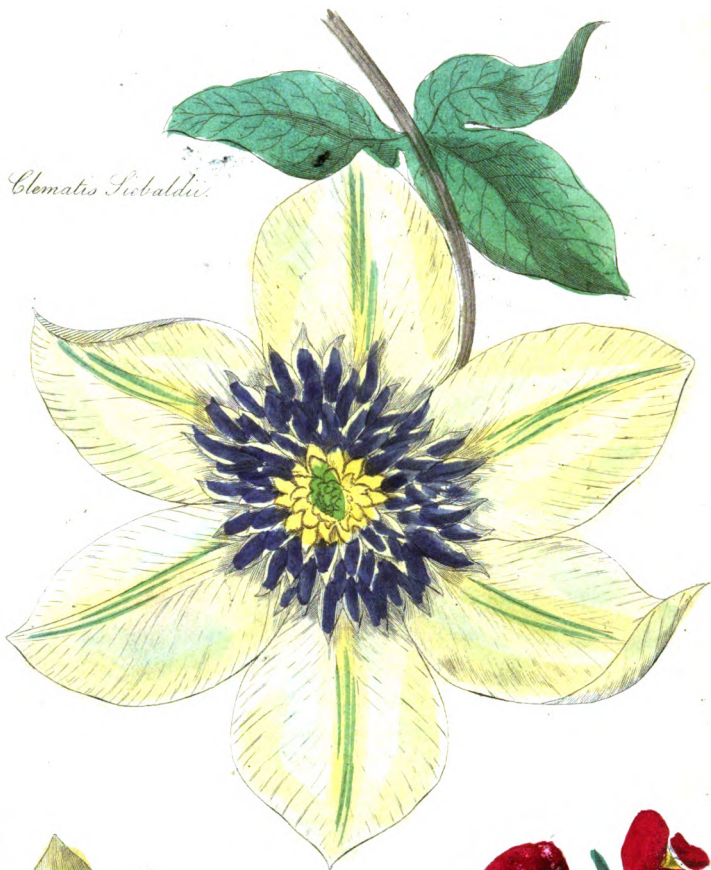
ROSE TREES, LILACS, PINKS, HYACINTHS, POLYANTHUSES, NARCISSES, &c. should regularly be brought in for forcing.

TENDER ANNUALS.—Some of the kinds, as Cockcombs, *Amaranthuses*, &c. for adorning the greenhouse in summer, should be sown by the end of the month; also any tender Annuals, desired to bloom early in the open border.

TEN WEEK STOCKS, RUSSIAN AND PRUSSIAN STOCKS, &c., to bloom early, should now be sown in pots, placed in a hot bed frame, or be sown upon a slight hot bed.

1

Clematis Lichabdliv.



Seedling Sparaxis.



Chorizoma ovata.

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THE
FLORICULTURAL CABINET,

MARCH 1st, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.
ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS FOR
STOVES, GREENHOUSES. &c,

BY J. THOMSON NURSERYMAN AND LANDSCAPE GARDENER, BEULAH SPA,
CROYDON, SURREY.

With practical observations and calculations on the consumption of Fuel, breakage of Glass, &c. under both kinds of roofs made during fifteen years practice as gardener to the Duke of Northumberland at Sion House, at Kew, and elsewhere; with an account of several years observations made on heating and forcing, houses with common Flues, Steam Boilers, and with six of the most approved systems of heating by hot water; also a description of his Economic wrought iron Egg-shaped BOILER, the invention of the Writer, which has given general satisfaction for the efficacy and simplicity of its construction, and its economy of fuel and labour.

KNOWING that a great diversity of opinion exists as to what description of materials are of most avail in the construction of roofs, for stoves, greenhouses, and other buildings intended for the culture of fruit, and of tropical and other exotic plants; and having had for years the management of extensive ranges of glass at Sion House and other places where the lights and rafters were constructed both of cast iron and wood, I am induced to

Vol. VI. No. 61.

F

submit to your consideration the result of my practical observations relative to the two description of houses under consideration as a guide to persons who may be inclined to raise such erections, but are unacquainted with the injurious consequences of ill-constructed hothouses for horticultural purposes. Having had fifteen years practical experience with, and the management during that long period of about three thousand running feet of glass, designed for the culture of fruits and plants, enable me to speak with some decision on the subject; and there are, I doubt not, hundreds of practical gardeners, who will confirm the truth of the following observations, and agree with me in the decided conviction I entertain of the superiority of wood over iron. I feel fully justified indeed in saying that when the merits of wood, and the demerits of iron are fully ascertained, the erroneous prejudice in favour of the latter, will cease to exist in the minds of all candid men who are practically acquainted with the properties of the two materials. Every person possessing even a very small portion of knowledge of the expansion and contraction of all metallic substances, may form some idea of the inevitable expansion of a large iron roofed house in a hot summer's day, and of its unquestionable contraction during a night of severe frost, so powerful have I known the action of the sun's rays to prove in expanding the iron rafters and lights of a large roof on a hot day, that I have found the strength of too and sometimes three men required to force down the sliding lights for the admission of air.

In fully equal proportion I have witnessed the contraction of the metal during the intensity of the winter, when so large have been the apertures between the rafters and the lights as to admit the external air, in a degree sufficient to counteract entirely the power of two strong fires when the flues have been heated to the greatest excess before the temperature of the house could be raised to three degrees of Fahrenheit, the thermometer standing at 18 degrees of frost, (out of doors) this was in February 1830. Now this took place in a house of no very great dimensions compared with the wood-roofed vinery I am about to describe. The dimensions of this building were forty feet long by sixteen wide, and nine high, with a pit in the middle for the culture of pines, &c. which very much reduced the cubical number of feet of air to be rarified as compared with the wood roofed house

which was fifty feet long, fourteen wide, and fourteen high, without any pit in the middle.

Having thus stated the dimensions of the houses, I shall now give the result of the investigation and calculations made relative to fuel, attention, &c. &c. the coals for both houses were measured before being placed for use, and after the consumption of the night's fuel, the result was as follows; the iron roof with 18 degrees of frost, required the consumption of nearly six bushels of coals, and unremitting attention during the night or until 3 o'clock in the morning, while the house with the wooden roof, consumed scarcely three bushels of fuel, in order to keep it at the same degree of temperature with its iron rival, and no attention was required after 10 or 11 o'clock at night, when the fires were made up and left. Moreover, being determined to investigate thoroughly the merits of the two materials, I caused a house constructed of wood, and also one of iron, precisely the same dimensions as regards superficial feet of glass, to be perfectly repaired in the autumn of 1832, and on having them examined and repaired in the following season, I found that in the cost of repairing the iron house was nearly double the sum required to repair the wood: I do not mean to say that double the number of squares were absolutely broken, but including the broken and cracked squares, there was more than double the number destroyed, and this is attributed to the expansion of the iron during summer, and its contraction in the winter.

From these calculations it is evident wood has the advantage over iron in four very essential points, viz. the saving of fuel, glass, and labour, and in the better growth of plants and fruits, as I have invariably found plants do not thrive so well nor look so healthy in an iron as in a wood roofed house. The non-conducting power of wood, and the electrical, nay, I may say, caloric sensibilities of iron, may be the cause of this difference. Iron is infinitely more liable than wood to the sudden and injurious extremes of temperature from heat to cold. I have always found during my practice, that no matter how the iron house is situated, unless there was a slight shading on the houses during the hot days in the summer months, the leaves of the pines and other plants become very brown and frequently scalded; but whenever these shadings are not used, I would strongly recommend that a large cistern or trough of water should be placed about the houses to make up for the continued evaporation for

the deficiency of the moisture exhaled by the powerful action of the sun.

Another important circumstance is worthy the gardener's attention, namely, that iron houses should be painted internally either annually or biennially at the furthest to prevent the drip from the corroded iron injuring the foliage of the plants, for I have always found this ochreous and metallic deposit injurious to the leaves.

Since these remarks were made, I have had subsequent proof of the correctness of my former comparisons having extended my observations still further in the year 1834, and these, as you will perceive, fully confirm the accuracy of my previous calculations by working two houses at the same temperature, 55 to 60 of *Fahrenheit*, the result was as follows, the wood roofed house consumed only a bushel and a half of coals every night, while the iron house burnt from two bushels and three quarters; to three bushels; this last experiment was two months later in the season than when my attention was made directed to the subject before, you will yet perceive they bear the same proportions, as to fuel, &c. as the former.

The dimensions of the houses were as follows, the wood roofed, fifty feet long, fifteen feet wide, and fourteen feet high; the iron roofed fifty feet long, thirteen feet wide, and twelve feet high; the latter was a vinery and had a pit in it for the culture of pines, which very much reduced the cubic feet of air to be heated, as compared with the wood roofed house for the culture of peaches which had no pit in the centre. Notwithstanding that, however, the whole of my observations and calculations are unfavourable to iron roofs, yet I am willing to admit that for lightness and neatness of appearance in the structure, iron has, and always will have the advantage, but still I am confident that if proper attention were paid to the construction of bothouses, and to materials used in the erections the appearance of a wood roofed house would not be altogether objectionable.

For assisting persons building houses for horticultural purposes, who may have had less practical experience than myself, I shall here give a brief description of such materials and mode of construction, which I think will combine the whole of the desired objects. The first thing to be attended to is to give the roof a proper pitch or inclination, so as effectually to carry off the water

and to prevent drip in the house, which is highly injurious to plants, particularly those grown in pots.

Secondly, to form the roof in the following manner, the rafters to be of wood varying according to the length of the rafter from six to eleven inches, the section of the rafter to be wedge-shaped from three to four inches wide on the upper side where the lights rest, and half an inch wide on the bottom or under the ends and sides of the lights to be made of wood, the top from five to six inches, the sides two and a half inches, and the bottom from six to seven inches wide, and the sash bars to prevent as much as possible the obstruction of the sun's rays, should be of copper, which will give the house a light and neat appearance, without subjecting the plants to the injurious extremes of temperature, heat and cold, as the small quantity of metal in the thin sash bars which need not be more than half an inch wide, and about the same in depth, will cause but very little variation in the temperature by radiation, and little from expansion and contraction, neither would it increase the expense of the light, but little more than if made of wood. For as copper of that dimension would not weigh more than 8 ounces to the running foot I should suppose it would be bought for about eightpence per pound, therefore the expence would be but trifling when compared with the advantage, indeed the extra expense would be gained in a few years by the saving of wood in repairing the glass, as glazier's cannot hack out old putty without destroying the sash bars, and this being very frequently repeated, as (is necessary when lights are kept constantly in use) very soon lessens the substance of the sash bars, I therefore recommend all persons when erecting forcing and other houses, to have them constructed of the above materials, particularly if they are desirous of excelling in the culture of fruits and plants, as by the use of copper sash bars, they obtain all the desired objects, viz. lightness of appearance, economy of fuel, glass and labour. Moreover, any Gentleman before erecting or deciding on any particular plan or dimensions of houses for horticultural purposes, should consult his own gardener or some other practical man, acquainted with the subject, as it is impossible for any architect or surveyor to know the proper dimensions and elevations of hothouses, greenhouses, or other erections, to ensure all the intended purposes, to which they are appropriated so well as the gardener. It is true that an architect may make a very interesting external drawing which

to the eye appears perfection, without its even answering any of the desired ends, convenience of paths or walks, bark or tan beds, stages, flues, cisterns for water, ventilation and innumerable other little requisites and necessities for a stove, greenhouse, or conservatory may be overlooked, and as every gentlemen who goes to the expence of erections of this description, expect in due time to have the benefit of his outlay in fruits, or the satisfaction of an extraordinary fine specimen, or general display of flowers, should he eventually be disappointed in not enjoying those anticipated gratifications through the bad construction of his house or houses. I regret to say it frequently occurs that the industrious, persevering, able, and anxious gardener is blamed for neglect of duty, or want of skill, not only by his employer, but by others equally unacquainted with the cause. But upon examination of the house by a competent and practical man, it turns out that the blame and ill success are attributable to the formation and aspect of the house, that various genera and species of plants requiring peculiar situations, had the gardener been consulted as to the height of the stages, depth and width of tan beds, and proper situation of the flues, or other modes of heating; all this disappointment to the employer and employed through not consulting a practical person would have been prevented. Moreover, it too frequently happens with these "*pretty*" plans prepared by non practical men, that there is an insufficiency of means provided for the proper ventilation of houses, and want of ventilation in iron curvilinear roofs, is frequently attended with the most disastrous consequences, and as a confirmation of the correctness of my observations, and of the importance of proper ventilation, plants are always liable to be scorched under an iron-roofed house.

I remember witnessing this last summer the destruction of the whole of a fine crop of grapes as well as the foliage, when early full swelled, in a Gentleman's hothouse in Kent, which was erected of cast iron about six years ago, the destruction occurred through the architect failing to allow proper ventilation, and to prevent the second house of grapes which had then suffered severely from sharing the same melancholy fate, the gardener who is admitted to be as good a practical man as any in the kingdom, caused some holes to be made in the back wall of the house, about one foot wide, and three long, where he introduced shutters hung on hinges, by which means he fortunately

succeeded in saving the second house of fruit, but not without great injury to the foliage; this misfortune and unavoidable circumstance was generally known in the neighbourhood of Seven-oaks, and observed by many practical gardeners, who can vouch for the accuracy of this statement.



Agreeable to your request I have forwarded the description of the boilers, which I trust you will receive safe. Figures 1, 2, 3, and 4, is intended for houses of small dimensions, and the large one, figure 5 for extensive houses: this, as well as the other boiler is oval-shaped, and would be sufficient to heat seven or 800 feet of four-inch pipe at a trifling expense, for during the severest part of last winter, all the houses I have heated with this plan of boiler, were kept up to their respective temperatures, without burning a bushel of coals, the only fuel used was small coke, and during the intense frost of Friday night Jan. 19th last, when the thermometer stood at a quarter past 6 o'clock in the morning, at 12 degrees below Zero, we had not the least difficulty with keeping every house, both stoves and greenhouses at their respective temperatures. I have devoted much time and attention to heating houses with hot water for several years, but more particularly last season, and this winter up to the present time, and from accurate calculations made of the number of feet of surface of glass exposed to the action of the weather, I am enabled from watching the thermometer, both out of doors and in the houses, with all extremes of weather, to calculate most correctly the number of feet of surface of pipe required to command (even with 42 degrees of frost) any given degree of heat required for stoves, greenhouses, and other buildings, and the want of this practical knowledge, and attention to this highly important part, (the radiating surface) has been the cause of so many complaints against the system of heating by the circumvolution of hot water, all of which would have been prevented had the hot water fixer devoted a few nights during the severe frosty weather to this indispensably necessary calculations, but then his remarks should not have rested on the observations made during a calm night of severe frost. I have found by sitting up to watch the thermometer for whole nights together, that a 16 degrees of frost, with a strong wind, is more trying to a house

than the severe frost on last Friday, Jan, 19th, when the thermometer fell to 10 degrees below Zero, or 42 degrees of frost.

I am induced to send you this account of the degrees of frost at Norwood, (which may be relied on), as I sat up the whole of the night to make my observations and calculations, thinking it might be interesting to some of your numerous readers

Figure 1, is the elevation of the front ; Figure 2, a transverse

Fig. 1.

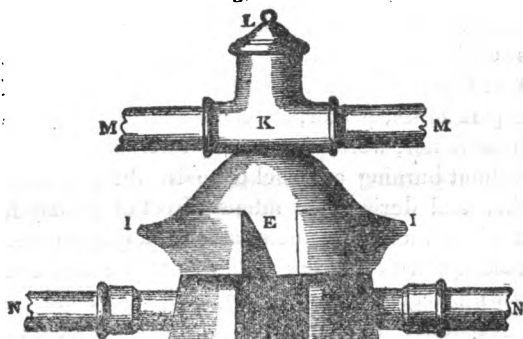
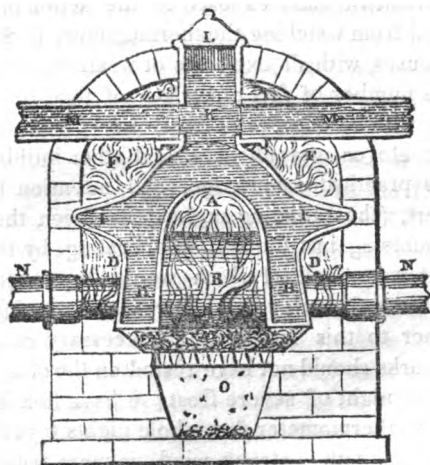


Fig. 2



section across the boiler and furnace ; Figure 3, a longitudinal section through the centre ; Figure 4, a plan of the furnace and lower part of the boiler, the same letters refer to similar parts

Fig. 3.

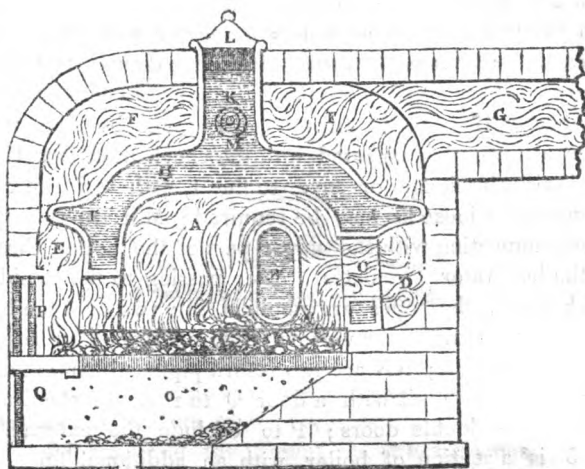
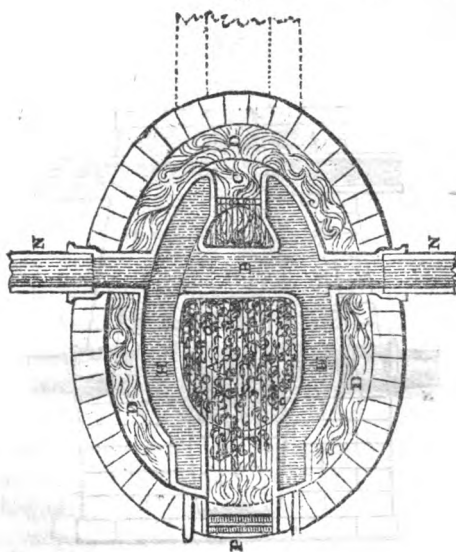


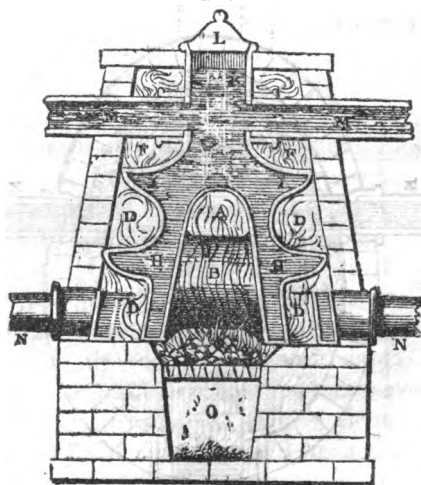
Fig 4.



in each figure : A is the furnace in which the fuel is placed, entirely surrounded (except the under side) with the boiler ; B is the check draft over which the heat, flame, and smoke passes to a small aperture C in the back of the boiler communicating with the flues D, surrounding the lower part which unite and pass through an opening E in the flange on each side of the furnace door to the flue F which surrounds the upper part, and terminates at the brick flue G, furnished with a damper to regulate the draft.

The boiler H is in the form of an egg, on the plan with a chamber all round connected with the check draft B and surrounded with the flange or cover to flue I, with an iron cap L either fixed or loose as may be required ; MM are two outlet pipes communicating with the upper part of the boiler, through which the hot water circulates. After passing to the outside of the brick work, the pipes are ramified into two or three branches, if it is required, for warming different houses or separate parts of the building ; NN are two return pipes, which enter the boiler ; O is an ash pit with a door Q to regulate the draft of the furnace as double doors ; P to exclude the external air. Figure 5 is a section of boiler, with an additional flue surrounding the lower part.

No 5.



I forgot to mention in my paper when describing the furnace door used to my apparatus, that between the door and the fire there is a piece of iron one foot three inches by one foot wide, which acts as a carbonizing plate, and when the fire begins to burn strong, so as to heat the iron hot, nearly the whole of the smoke is consumed. I will thank you to notice this omission and please let the whole of these observations and instructions as well as those sent before, appear in full if possible, as they are all very useful hints to gentlemen and gardeners.

W. THOMSON.

(To be continued,)

ARTICLE II.

CONVERSATION BETWEEN BLOOMWELL AND WOULDKNOW.

BY BIZARRE.

(Continued from Vol. V. page 270.)

WOULDKNOW. I think seed is sometimes very scarce.

BLOOMWELL. Some years are unfavorable to the sowing of seed, and I am afraid the present one will be among the number, the flowers being late in bloom. As soon as the petals wither, they should be carefully extracted, and most part of the calyx cut away, so that there may be no place to hold the wet, which soon spoils the seed. You should also be careful to protect the pods from earwigs, which are as destructive to the seed as they are to the flowers. A piece of wool wrapped round the stalk so as to prevent all communication with the pod, is the most effectual method of preventing their depredations, as they do not often get through the wool, their horns frequently getting entangled in it, they cannot proceed. When the seed is ripe, the pods should be dried, and then put into paper boxes till spring. Then shake the seeds out of the husks and sow it about the second week in April, in pots or boxes. When the plants are about an inch and a half or two inches high, transplant them into a bed of good light soil about six inches apart all ways; when planted closer they are often drawn up without layers, and so you have sometimes the mortification of losing a good seedling as soon as you have obtained it. The next summer when they begin to show bloom, pull up all single and worthless ones, to give more air and room to the others, giving all such as

have good properties another year's trial, as sometimes they will be much better the second year than they are the first.

WOULDKNOW. I had a handsome seedling picotee last year which I layered very carefully, but alas in the wet weather the worms broke off and destroyed every sprig, so that I entirely lost it.

BLOOMWELL. I do not wonder at it, I have been served so myself, but lately I have taken care to prevent the mischief.

WOULDKNOW. Pray, how may it be prevented?

BLOOMWELL. When you see a seedling worth keeping, make ready a pot of sufficient size, according to the growth of your plant, take it up with as much earth attached as you can place it in the pot, and fill it up with compost, water well, tie up the flower stems to a stick, and layer the shoots, keep it moderately moist, so that it does not flag, and in the course of a week it will be established.

I have shifted many seedlings in this manner when in bloom and never lost one. The layers take root quite as well as those that have been in pots all the season.

WOULDKNOW. When do you begin to layer your carnations, Mr. Bloomwell?

BLOOMWELL. Any time when they are fit to layer, I have layered them at all times, I believe, between Mayday and Martinmas, and have had rooted plants from it, but I by no means recommend late layering, except when you cannot get them ready to lay in the early part of the season: some will say that early layers are apt to spindle, but I do not think that their early layering is the cause of it, they would have spindled just the same if they had not been layered; the earliest layers get the best roots, and are most likely to stand the winter, therefore I always begin to lay as soon as the grass is ready, and continue as long as I have any to layer.

WOULDKNOW. What do you consider the best method of layering?

BLOOMWELL. Begin your incision about a quarter of an inch below the second joint, and continue it close up to, but not into the joint, but of the lip close to the joint from the outer ring of which the roots will protrude, when you separate the layer from the mother plant, cut the other side close to the joint also, and the young plant will be as sound as a piping when the joint is cut through in the usual way, the pith often gets damaged, and

causes the plant to perish. I know some florists make a rule of leaving a piece of stalk to the layer, thereby (as they say) to increase their chance of more roots, but in my opinion they only increase the chances of decay. I received some layers last season from a florist in Lancashire, which were cut through the joint and half way to the next, the result was, several of them perished before blooming; perhaps some people may think it their interest that the plants they sell, should not live; but for my part I am determined not to buy twice of any person who layers in that manner. When the layers are cut in the manner I have described, close to the joint, there is not half the risk of the wet destroying them as it frequently does; those layered in the common way by lodging in the pith, which soon rots and contaminates the whole plant.

WOULDKNOW. The shoots sometimes grow so high up the stalk that they cannot be got down to the surface of the pot, how do you contrive to manage them?

BLOOMWELL. The simplest way is to place another pot filled with soil at a proper distance, and gently bend down the stalk to it, securing it with a strong hook, and then lay your shoots. Another method said to be practised in France, is to take a small piece of lead paper, such as tea is commonly wrapped in, and after you have cut your shoot in the proper manner, wrap the paper close round the stalk at the bottom, letting the top remain wide open, in the form of an inverted cone, the joint being about the middle of the paper, fill it with fine compost, and water it to make it settle round the joint, it must also be watered occasionally till struck, make the paper fast to the stick which supports your plant.

WOULDKNOW. Which is the best time to take off the layers?

BLOOMWELL. The general part of them should be potted off the beginning of October, such as are slow or late strikers, may be perhaps as well left on till spring. When well rooted however, they may be taken off at any time during winter, provided it be open weather, placing the plants thus removed under a frame or hand-glass, or what is better, in a carnation house till spring. In planting out your layers in the spring, do not be too much in a hurry with them, but wait till the weather appears settled.

WOULDKNOW, I am extremely obliged to you for your information, and hope to visit you again.

BLOOMWELL. I shall be happy to see you or any other florist

at any time for the company of florists always delights me ; you know the old adage,

Birds of a feather,
Will flock together !

Having brought this conversation to an end, I return my best thanks to the Conductor for his readiness to insert it, and should you or your readers approve, perhaps I may give you, at no distant period, another conversation on Floral Affairs.

BIZARRE.

(We shall be much obliged if our respected correspondent will favour us with the article referred to.—CONDUCTOR.)

ARTICLE. III.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 36.)

THIS edifice was constructed by immense stone beams laid on pillars of stone, the first flat being a square of about four hundred feet each way; these flats or stories lessening in surface as they increased in height. The stones were first covered with reeds, cemented together with bitumen. On this covering was laid a double row of bricks united by cement, which were then also covered by sheets of lead, in order to prevent the moisture from penetrating downwards; and these sheets lastly sustained a depth of earth sufficient for the plantation of trees and shrubs. We are told that this elevated shrubbery was watered by fountains, the water of which we presume to have been conveyed into it by manual labour, as skill in hydraulics appears to be an acquirement of later times; and perhaps the ancient Egyptians from their peculiar situation and circumstances, were the only people who attended at that period to this science.

We have noticed these gardens of Babylon, to show that pleasure grounds have existed from the earliest ages in civilized countries. As the arts have flourished or been neglected so have gardens flourished or decayed.

The Romans would naturally attach to their villas in this country a similar style of garden to that which they had in Italy. But this would be lost in baronial times, when nothing was secure outside the castle walls. However, Gardens of considerable ex-

tent were joined to the convents and monasteries of England, and we find that the cultivation of flowers and shrubs was attended to by most of the religious recluses of those establishments, as well as that of fruits, pot herbs, and medicinal plants.

The citizens of London had gardens to their villas as early as the time of Henry II., which Fitz-Stephen tells us were, "large, beautiful, and planted with trees." In Cerceau's Architecture, which appeared in the reign of Henry III. every ground-plot was laid out with plans of labyrinths darterres.

The royal gardens of Nonsuch in Surrey were formed in the time of Henry VIII. The privy gardens of that palace were planted with flowering shrubs and fruit trees, and ornamented with basins of marble fountains, and pyramids. The gardens of Hampton court were also planted about the same period, by Cardinal Wolsey; and from that time to the present. the taste for ornamental trees and shrubs have continued to increase.

Charles II. returned from the continent with a taste completely French; Evelyn also, from his travels through France and Italy, during the commonwealth, imbibed similar ideas. Thus our plantations at that time consisted entirely of long, dull avenues, and our pleasure gardens of clipped hedges, walks laid out upon geometrical principles, and evergreen trees shorn into fanciful and ridiculous figures. Le Notre who planned the celebrated gardens of Versailles, came over at this time to England, by desire of Charles, to plant the parks of Greenwich and St. James's.

Early in the eighteenth century, the formal and heavy style of gardening which had for some time prevailed, was changed by the united efforts of the English poets and painters of the day. By their pure taste and united efforts, they give birth to that classical style of planting which has since been so much admired and imitated throughout the most refined parts of Europe.

Whilst Addison was forming a rural garden at his retirement at Bilton, near Rugby, Pope was employed in laying out a picturesque plantation at Twickenham. At the same time, with their pens they engaged in open war against the right angles and disfiguring shears of the gardeners of their day, against whom they levelled some of the keenest shafts of their ridicule. These geniuses were seconded by Kent, who as a painter and architect, was adapted to embody their imaginations. In his capacity of landscape planter, he laid out the grounds of Claremont and Esher, about the year 1730; and as he painted the hall at Stowe,

it is probable that he assisted Lord Cobham in the grouping of his plantations also, which had been commenced on the modern land about the time Pope was forming the gardens at Twickenham.

We are informed by ancient historians that the Persians of old had parks, which contained animals of the chase; and the Romans had similar enclosures for the same purpose. It is generally supposed, that the park at Blenheim is the site of grounds that were once used by that people for hunting. It is also conjectured to be the same spot which formed the park of Henry I. who we are told had a park at Woodstock

The word "park" is originally Celtic, and like the French word *parc*, signifies an enclosed spot for the confinement of animals. "No man can now," says Wood, "erect a park without a licence under the broad seal; for the common law does not encourage matters of pleasure, which bring no profit to the Commonwealth. But there may be a park in reputation, erected without lawful warrant: and the owner of such park may bring his action against persons killing his deer." It is considered in law to be no longer a park when all the deer are destroyed, for a park must consist of vert, venison, and enclosure; and to pull down park walls or pales, subjects the offender to the same punishment as killing deer.

It will be necessary now to make some observations on the formation and planting of shrubberies, though under each article we shall state what trees assimilate best in neighbourhood. The style of this sort of garden must depend so much on the extent, situation, and character of the ground, that it would be absurd to offer more than general remarks.

The plantation should be carefully made to suite the building it is to surround. As the villa and ornamental cottage form the largest portion at present of edifices that claim a pleasure-garden, we shall confine our observations to the grounds attached to these dwellings. As such houses are generally built on situations too flat to admit of much variety, the first study should be to find how and where we can break the level by throwing up elevations, so as to answer the double purpose of obscuring private walks, and screening other parts from the wind.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1. CALESTEMON MICRIOSTACHYUM. *Small spiked.* (Bot. Reg. 7.

MYRTACEÆ. ICOSANDRIA MONOGYNIA.

This very pretty flowering plant, is a native of New Holland, and has bloomed in the collection of William Harrison, Esq. Chesunt, Herts, for the first time in Europe. During the last year it was exhibited at one of the meetings of the London Horticultural Society, and a medal was awarded for its exhibition. The foliage of the plant bears a resemblance to the *Diosma uniflora*. The flowers are produced similar to the *Melaleucas*, having long stamens, and in neat spikes. They are of a very vivid crimson colour, and have a most brilliant appearance. The plant ought to be in every greenhouse and conservatory.

We understand that it is easily increased by cuttings. *Calistemon* from Kalos, beautiful; and *stemon*, stamen; referring to the brilliant colour of the stamens.

2. CARICA CITRIFORMIS. *Small Ciron fruited Papau.*

CARICEÆ, MONÆCIA DECANDRIA.

The plant is a native of Guiana, and it has fruited in the hot house collection of Charles Horsfall, Esq. Liverpool. The flowers are small, of a yellowish white. The fruit is about two inches long, and an inch and a half across, of a very deep orange colour, which have a beautiful appearance, hanging so gracefully pendant on the branches. The plant grows very vigorously, so as to bear fruit the first season after the seed is sown. It grows to the height of five or six feet.

3. CHOROZEMA CORDATUM, *Mr. Mangles's Chorozeema*, (Bot. Reg. 10.

PAPILIONACEÆ. DECANDRIA MONOGYNIA.

This very neat and handsome flowering species, is a native of the Swan river colony, and has been raised in the Garden of R. Mangles, Esq. Sunning hill, Berkshire, where it has bloomed. The plant is a very distinct species, both in its foliage and flowers. A leaf is near two inches long, by one broad. The flowers are of a fine orange scarlet, the vexillum having a yellow base streaked with dark; the keel is of a crimson purple colour. The plant is a very free grower, Mr. Mangles's being at one year old near a yard high. It is a profuse bloomer, and ought to be in every collection of greenhouse and conservatory plants. From the well known liberality of the above gentlemen, cuttings will be extensively distributed, and as it propagates freely, plants will soon be in the Nursery collections. *Chorozeema* from *choros*, dance; and *zema*, drink.

4. CIRRHOPETALUM THOUARSII. *Thouar's Cirrhopetalum*.

(Bot. Reg. 11.

ORCHIDACEÆ, GYNANDRIA MONANDRIA.

Mr. Cuming sent this very interesting orchideous plant from Manilla, to Messrs. Lodiges's, where it bloomed last season. The plant produces an-

VOL. VI. No. 61.

G

merous flower stems, each rising to a foot high, and terminating in a dense spreading raceme of ten or a dozen flowers. The sepals are strap shaped, about an inch and a half long, of an orange and yellow colour. The petals are very small, pale yellow spotted with red, and the edges bordered with bristly pointed teeth, and the end terminating in an awl shaped point.

The plant merits a place in every collection of Stove Orchideæ. Cirrhopetalum, from kirrhos, tawny; and petalon, a petal; referring to the general colour of the flowers.

5. EPIDENDRUM FLORIBUNDUM. *Many flowered.* (Bot. Mag. 3637)
ORCHIDACEÆ, GYNANDRIA, MONANDRIA.

A native of Mexico, from whence it was sent to Messrs. Lodiges, in whose collection it has bloomed. The flower stem rises about a foot high terminating in a panicle of numerous flowers, produced on several spreading branches. The flowers are about an inch across, both sepals and petals are very narrow. The petals are white, column green at the base, white above. Lip, white; with a carved line of red dots. The plant continues a long time in flower, and being produced numerous have a very interesting appearance, Epidendrum, from epi, upon; and dendron, a tree; referring to its native habitation.

6. EUPHORBIA VENETA. *Venetian Euphorbia,* (Bot. Reg. 6.)
EUPHORBIACEÆ, MONÆCIA, MONANDRIA.

A native of the country around Venice, and has bloomed in the garden of the Hon. W. F. Strangeways, at Abbotsbury, Dorsetshire. It is a robust growing plant, what is usually denominated half shrubby. It is evergreen, and its trailing habit renders it suitable for a rock work, very well combining with sedums and similar plants. The flowers are of a yellowish green, produced numerous in a dense spike, and continue in bloom during a great part of summer. Euphorbia, so called after Euphorbus, Physician to Juba, King of Mauritania.

7. LOAZA LATERITA. *Red flowered.* (Bot. Mag. 3632)
LOACEÆ, POLYADELPHIA POLYANDRIA.

Mr. Tweedie discovered this very interesting species in Tucuman, and seeds of it were sent to the Glasgow Botanic Garden; where it has bloomed both in the stove, and during summer against a good aspected wall, in the open air, in the latter situation it produced fruit also. It is a most beautiful annual plant, deserving a situation in every greenhouse, or other favourable situation.

The plant is a climber rough and stinging, the stems climb to the length of twenty feet or upwards, producing numerous flowers of a bright orange scarlet colour. Each blossom is near three inches across.

8. MAMILLARIA LEHMANNII. *Lehmans.* (Bot. Mag. 5634.)
CACTEÆ, ICOSANDRIA MONOGYNIA.

This singular species has bloomed in the fine collection of Messrs. Mackie, Norwich; it is a native of Mexico. The flowers are of a pale straw colour, about two inches across.

9. PASSIFLORA TUCUMANENSIS. *Large stipulated passion flower.*

This species was also discovered by Mr. Tweedie, at St. Jago de Estero, and sent by him to the Glasgow Garden. Where in the stove, it bloomed in July 1837. The flowers are white, about two inches across. The plant grows very rapidly, and blooms most profusely.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON ROSE DU ROI, &c. I wrote to you some time since on destroying the wireworm, and from your so obligingly inserting the few observations, I made on the subject, I am induced to send you the following remarks, and shall feel obliged to any of your correspondents who will favor me with an answer to my question. Why have my standard rose trees (which bloomed luxuriantly last year), not put forth one blossom this autumn. They are of the 'Rose du Roi' species and very healthy: Should I have pinched off the buds in May and June? Perhaps some one who is in the habit of growing these kind of roses will favor me with an answer, likewise a description of the best soil for them and the Yellow Noisette.

ON A FUNGUS RISING AMONG TENDER ANNUALS, &c. I was very much troubled last season in raising my tender annuals, by a species fungus forcing itself up among the young seedlings in my hot bed. If some reader of the Cabinet will tell me how to guard against this evil another time. I shall be much obliged by an early answer.

CALCEOLARIA.

REMARKS.

NEW PLANTS.---*Aconitum Chinense*. A very fine flowering species sent by Dr. Von Siebold from Japan, we saw it in bloom at Mr. Young's, Epsom Nursery. It is quite a hardy herbaceous perennial. The flower stems rise four feet high, each having numerous lateral spikes of fine blue flowers. Each flower is about two inches across.

Lilium lancifolium album. Mr. Young also possesses this new kind sent by Dr. V. Siebold from Japan. The flowers are white, very handsome. Also the two following kinds from the same source, viz.

Lilium roseum, and *L. punctatum*, both handsome flowering species. To persons partial to this beautiful tribe of plants, the above will be an interesting addition.

Scabiosa grandiflora, var. A new and very fine flowering variety is in the possession of Mr. Groom, Walworth, who will soon have plants for sale. It is a very fine ornament to the flower border.

Epimedium violaceum. Mr. Groom possesses this new, pretty and singular flowering species, it will require to be grown in the greenhouse, and will merit a place in every one.

Galphemia splendens. This very neat and pretty flowering species, we saw in bloom in the greenhouse at Mr. Groom's. The plant grows three feet high, or upwards, producing numerous lateral branches, which are adorned with pretty golden yellow flowers, each blossom about an inch across.

Daviesia verdata. Mr. Groom also possesses this new and fine species, meriting a place in every greenhouse. Its beautiful blossoms are strikingly handsome the most of the genus are remarkably neat and interesting. Mr. Groom will have a stock of this new species for sale in spring.

Euonymus japonica. A very strikingly pretty greenhouse plant, the plant grows to a very neat shrub, having fine foliage, the leaves are marked and freckled with white and gold and have a green neat edging. The plant gives a very neat relief in a collection of plants; Mr. Groom cultivates this new species.

Hepatica violacea. This new and very fine flowering species, is in the possession of Mr. Low, of Clapton Nursery, who will have plants for sale the coming season. We understood it would require to be grown in the greenhouse or cool frame during winter.

Campanula verbenafolia. We saw this new and pretty flowering species in bloom at Mr. Low's, its spikes of light blue flowers, making a beautiful shew. It is a native of Japan, and most likely will require to be grown in the greenhouse or pit frame. The plant merits a place in every collection; plants will be for sale in spring.

Echium simplex. This new and pretty species we saw at Mr. Low's, the flowers are white, produced in spikes, and have an interesting appearance; like the rest of the genus it is very showy. It deserves a place in every collection of greenhouse plants.

Phleponopsis amabile. This very singularly beautiful flowering orchideous plant, has bloomed in the fine collection of Messrs. Rollinsons, Tooting, who received it a few months back from Minalla. The flowers have the appearance of a large moth, they are beautifully streaked and veined, and are produced numerously. It is a very valuable addition to our Orchideous Epiphytes.

Stevia salicifolia. A very pretty new flowering species, which we saw at Mr. Low's; the flower spikes rise about a foot high, they are white. The plant requires to be kept in a frame during winter.

Correa speciosa grandiflora. This is a very fine flowering kind, much superior to the original handsome species; it deserves a place in every greenhouse or conservatory. Its fine scarlet green and yellow blossoms, hanging so gracefully in profusion, have a very ornamental appearance, and render it a very desirable plant; Messrs. Loddige's, of Hackney Nursery, possesses this fine variety,

OF GREENHOUSE AND HALF HARDY PLANTS WHICH WILL FLOURISH AND BLOOM FREELY DURING THE SUMMER MONTHS, IF PLANTED OUT IN THE OPEN BORDER.

Within a few years the brilliancy of modern ornamental gardening has been most surprisingly increased by the practice of planting out in the open borders many of the most splendid and free flowering greenhouse plants. By this means a very considerable number of show exotics are caused to blossom much more profusely than under any other mode of cultivation.

Some of the kinds of plants are much more suited for growing in masses, "as a bed of each," than others are; such we have marked with a star, and those which will thrive best in the air and smoke of towns, with two stars.

The kind of soil each particular plant will flourish and bloom the best in, is annexed to them. We have found, during twenty years practice in this department of Floriculture, that some plants when turned out of pots into the

open borders, even in common soil, have a tendency to produce a luxuriant foliage, and but very few blossoms; each luxuriance, however, is easily prevented, by using a mixture of sand or peat with common soil.

In the list of plants here given, we have only inserted such as keep in bloom for several successive months; there are many other beautiful plants, as *Gladioluses*, *Ixias*, *Watsonias*, and new *Azaleas*, *Rhododendrons*, &c., that will flourish and blossom equally well; but their blooming season being so short and at so early a season of the spring, as to be liable to injury, we have on that account omitted them. *Pelargoniums* are also omitted; the number of varieties, species, and colours being so extensive, we could not possibly particularize them within our limits. All the kinds, however, will flower freely in the open borders. Those of a luxuriant habit should be planted in sandy loam and peat, to prevent a mass of strong roots and foliage, and cause the production of flowering shoots; and others of a more delicate habit, should be grown in rich vegetable mould, from decayed leaves, &c. and peat soil.

The period for turning out plants into the open borders, varies with the situation of climate, season, &c.: but it is better to be a week too late than run the risk of early destruction. We purpose giving some directions before the Autumn, relative to the best means of keeping up a stock of plants for the open borders.

BLUE FLOWERS.

- Agathæa cœlestis*, 1ft. 6in., May, November, peat and loam.
Ditto linifolia, 2ft., April, October, do.
 * *Anagallis Monelli*, 1ft., May, October, do.
 * *Ditto Webbiana*, 1ft., do. do. do.
 * *Ditto Phillipsii*, 2ft., do. do. do.
 * *Cœlestina ageratoides*, 1ft., June, October, rich mould.
 * *Ditto cœrulea*, 1ft., June September, do.
Commelina cyanea, 1ft., July, September, do.
Heliophilla linearifolia, 1ft., June, September, sandy peat.
 * *Heliotropium corymbosum*, 2ft., May, October, rich mould.
 * *Hydrangea hortensis*, 1ft. to 2ft., June, October, peat and pure loam.
 * *Lobelia begoniæfolia*, 6in., June, September, do.
 * *Ditto Erinus*, 6in. June, September, sandy peat.
 * *Ditto senecioides*, 1ft., July, September, rich mould.
Ditto cœrulea, 2ft., June, October, rich loam.
Ditto cœlestina, 2ft., do. do. do.
Salvia africanus, 2ft., May, September, rich mould.
 * *Ditto angustifolius*, 2ft., June, September, rich mould.
 * *Ditto chamædryoides*, 1ft. 6in., June, October, rich mould.
Sollya heterophylla, 1ft., July, October, do.
 * *Streptocarpus Rexii*, 6in., April, November. loam and peat.
Tweedia cœrulea, 2ft., July, September, rich mould.
 * *Witsenia corymbosum*, 1ft., May, October, sandy peat.

CRIMSON.

- Alstræmeria psittacina*, 4ft., August, October, loam and peat.
Azalea indica, var. *ignescens*, 2ft., May, September,
Amaryllis formosissima, 1ft., May, September, rich mould.
Ditto Forbesii, 1ft. 6in., July, September, do.
Ditto do. *purpurea*, 1ft. 6in., July September. do.
 * *Calceolaria Wheelerii*, 1ft., May, October, peat and loam.
Cuphea Llavea, 1ft. 6in., June, August, do.
Dianthus aggregatus, 1ft., June, September, rich loam.
Phlox Drummondii, 2½ft., June, October, rich loam.

VERY DARK.

- * *Calceolarias* numerous dark varieties, 2ft. May, October, rich mould.
Lobelia mucronata, 2ft. to 3ft., July, September, rich mould and peat,

- ** *Lotus Jacobæus*, 2ft., May, November, rich mould.
Senecio elegans, 1ft., July, November, do.

GOLDEN.

- Galaxia grandiflora*, 6in., May, September, sandy peat.
Hunnemania fumariifolia, 2ft. June, September, rich mould.
 * *Mesembryanthemum aureum*, 1ft., May, October, do. and lime rubbish.

ORANGE.

- ** *Anagallis grandiflora*, 2ft., June, October, rich mould.
 ** *Calceolaria Fothergilla*, 6in., May, October, rich mould and peat
Homeria collina, 2ft., May, August, sandy peat.
 * *Lechenaultia formosa*, 1ft., June, September, peat and loam,
 * *Ditto oblata*, 1ft., June, September, do,
 ** *Lychnia grandiflora*, 1ft. 6in., June, October, rich mould.
 * *Mehernia pulchella*, 2ft., July September, loam and peat.
 * *Mesembryanthemum aurantiacum*, 1ft. 6in., June, September, rich loam
 and lime rubbish.
 * *Ditto bicolorum*, 1ft. 6in., May, September, rich loam and lime rubbish.
 ** *Mimulus glutinosus*, 2ft., May, October, rich mould.

PINK.

- Alstræmeria pallida*, 2ft., August, October, loam and peat.
Chironia linoides, 2ft., June, September, sandy peat.
 * *Crocea saligna*, 2ft., June, October, sandy peat and loam.
 * *Erodium incarnatum*, 6in., May, August, rich mould.
 * *Linum suffruticosum*, 1ft., August, October, peat and loam.
 * *Mesembryanthemum floribunda*, 6in., May, October, sandy loam.
 ** *Primula prænitens (sinensis)* 1ft., May, October, sandy loam.
Stevia lucida, 2ft., June, October, peat and loam.
Ditto salicifolia, 1ft. 6in., July, September, peat and loam.
 * *Tephrosia grandiflora*, 3ft., May, October, do.
Verbena Drummondii, 2ft., June, October, do.

PURPLE.

- ** *Calceolaria archnoidea*, 1ft., June, October, loam and peat.
 ** *Ditto purpurea*, do. do. do.
 * *Ditto insignis*, 1ft. 6in., do. do. sandy peat.
 * *Chironia frutescens*, 1ft. 6in., do. do. peat and loam.
 ** *Cineraria cruenta*, 2ft., May, July, do.
 * *Ditto lanata*, 2ft., May, September, do.
 ** *Lobelia speciosa*, 2ft., May, October, do.
 ** *Ditto unidentata*, 6in. May, October, do.
 Ditto strepurpurea, 1ft., do. do. do.
 * *Loddigesia oxaladifolia* 1ft., May, October, do.

(TO BE CONTINUED.)

FLORICULTURAL CALENDER FOR MARCH.

ANEMONES—should now be planted, as early in the month as can be done.

AMARYLLIS's—and other litiaceous bulbous plants which have been kept dormant, may now be repotted, and put into an increased temperature.

ANNUALS, HARDY,—if the soil be moderately dry, some of the most hardy kinds to bloom early in the summer, may be sown in warm parts of the

country, or situations well protected, early in the month, but in cold places not until the end of the month; for if the seeds of many sorts have begun to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is, to have a quantity of finely sifted soil; spread a portion where desired, after scattering the seeds, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER—Such as have been sown and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown use fine soil pressed to the seeds, and when convenient, place the pots (if used) in moist heat till the plants are up.

AURICULAS.—Those requiring top dressing should be done immediately, by taking off about two inches deep of the top soil, and replace it with some very rich, more than one-half of it should be rotten cow dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall upon them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CARNATIONS. At the end of the month, the last year's layers kept in pots or beds during winter, should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable: Two barrows full of fresh yellow loam, three of well-rotted horse dung, and half a barrow full of river sand, well mixed; plant in it without sifting, but breaking very well with the spade. place the plants in a sheltered situation out of doors.

CREEPERS.—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface.

CAMELLIAS.—Those kinds done blooming should be immediately potted, for if allowed to push the least before this is done, the operation frequently kills the tender shoots. In potting, &c. never cut the matted roots, but shake the soil off, and replace with what new soil may be required. If the balls are not matted with roots, just loosen the outer fibres with the hand, which will induce them sooner to push into the soil. A very free drainage is required, or the plants will never flourish. The following is a very good compost for growing them in:—One barrow-full of rich loam, half a ditto of peat, half a ditto of very rotten dung, or rotten vegetable mould, and one third ditto of Calais, or other fine sand. Never use sifted soil, but well broken. As soon as the plants are potted, place them in a temperature of about 68 degrees of heat by day, and 60 by night. This will cause them to push more vigorously, and more certain to induce flower buds.

DAHLIAS.—If not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot-bed frame till up.

GESNERIA, GLOXINIA, and TROPÆOLUM bulbs, that have been kept dry during winter, should now be potted, and be gently brought forward.

HYDRANGEAS. Cuttings may now be taken off, cutting off the tops of any shoots that have very plump leading buds, about one inch below the bud of each cutting. These inserted, each into a small pot, and placed in moist heat, will soon strike root, and will, with future proper treatment, bloomed one fine head each, most strikingly beautiful.

PELARGONIUMS. Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES should now be top dressed, as directed for Auriculas, only the soil used need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws.

ROSE TREE: not yet pruned, if allowed to remain untouched till the new shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat, will come into bloom in May.

TUBEROSES should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS.—At this season such as happened to be affected by canker will appear sickly, the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure.

REFERENCE TO PLATE.

CLEMATIS FLORIDA; VAR SIEBALDII. This very handsome flowering variety was recently sent by Dr. Von Siebald from Japan. The plant grows very rapidly if planted in a warm situation, and flowers very abundantly. The petals, forming the dark centre, have a very pretty appearance in contrast with the greenish-white calyx sepals. If the plant be grown in the greenhouse it flourishes better, and produces a finer effect than in the open air. It flourishes best in peat and loam. We shall have plants to dispose of this month. Clematis, from clematis, a vine, referring to its climbing habit.

SPARAXAS (Seedling.) This very neat and pretty variety was raised by H. Dobree, Jun. Esq., Guernsey, along with a number of other very beautiful kinds. These the plants grow to the height of from two to three feet, producing spikes, with a profusion of blossoms. Their neatness, ease of culture, and beauty of the flowers, recommend them to all lovers of flowers.

CHORIZEMA OVATA. This most lovely species was discovered by Mr. Baxter, in New Holland, and is one of the neatest and handsomest greenhouse plants. It produces its blossoms in vast profusion. The plant grows about two feet high, having numerous lateral shoots, clothed with flowers. It merits a place in every greenhouse; its beauty and cheapness combine to recommend it. Chorzema, from choras, a dance, and zema, a drink. Labellardiére found this plant upon the west coast of New Holland, at the bottom of a mountain, near a place where after being tantalized with finding many salt springs. His party had just met with an ample supply of fresh water. This welcome refreshment seems to have suggested the name.

1822



Ansell's Unique.
Seedling 1886

L. M. 10017



England's Defiance.

THE
FLORICULTURAL CABINET,

APRIL 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON RAISING TULIPS FROM SEED,

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, NEAR MANCHESTER

THE raising of new varieties of Tulips has at length engaged the attention, of the amateur and Florist, and we are now on equal terms with the Dutch Florists. This change may be attributed to the care and attention bestowed upon the taking of seed. The great misfortune of our early raisers of Tulips from seed, was, that they took seed indiscriminately, and after sowing and waiting patiently for a number of years, they were much disappointed when they came into bloom, for there was scarcely one of medium quality. Had their judgment been properly directed, the English Florist would not have been so many years behind.

I would recommend the young Florist to seed only those which possess the best properties, and where one is deficient in some points and excel in others, to impregnate the one with the other. For instance, Charbonnier Noir or Polyphemus, possess every requisite but one, and that is the ground colour, which is a pale straw. To remedy this defect, I would impregnate them with San Joe, Captain White, or Old Dutch Catafalque, or some other sort which possesses a good bright yellow colour. If the colour of the Min d'or could be added to the black feathering of the Charbonnier, it would rank as first among Bizzares. Roi de Siam,

VOL. VI. No. 62.

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is generally too late for general exhibition, although it is a very fine variety. I would therefore impregnate it with Bienfait Incomparable, or La Mere Bruin Incomparable, in order to incorporate its good properties and also to endeavour to raise a sort equally as good, but rather earlier. The roses also are in general too high coloured, and here also he would endeavour to raise a variety possessing the beautiful colour of a Dolittle. Care must be taken, after impregnation, by either tying the bloom up with cotton, or placing it within a net bag, so that bees or flies may not injure your work. A careful attention to these hints would materially increase our number of good stage flowers. Tulips that have a tinge at the bottom of the cup, should not on any account whatever be seeded, as all Tulips raised from seed partake more or less of the parent root. Maddock recommends breeders as the most proper to seed from, and I agree with him in some respects, as the length of time the bulb remains in the ground after the tulips are got up in order to ripen the seed, is apt to spoil one in a fine rectified condition, by causing it to come what is termed dirty, that is, with too much colour. But it rarely happens that you possess breeders of the fine varieties, and of course you must in this case run all risks. To remedy this defect of too much colour, I find that by taking them up the following year, when in bloom, and placing them in sand in a shady place, has a great tendency to counteract this superabundance of colour.

On Sowing. Much difference of opinion exists, as to the proper season for sowing the seed. Some Florists sowing at the same time they plant their bulbs, and others in April. I find by experience the best time is in January. The method I adopt is to fill Carnation pots with good rich soil, and plant my seeds, (instead of sowing) edgways, and slightly covering it with soil, by so doing the seed will better force its way through the soil, than if sown promiscuously, as each seed will in all probability lie flat, which renders it less likely to force itself through the soil. Having thus disposed of my seed, I plunge the pot in a cold frame until the latter end of April, when I again plunge them in the open garden. I have also placed the pots in the open garden after sowing the seed, but I have generally lost one half by the frost and the wind by being unprotected; I am of opinion if seed is gathered and hung up in a warm room for a few days, and then sown, a year will be gained by that means. The seed will be ripe early in August, and if sown as directed above, no doubt they will come up in three or four weeks. They will then have

two months at least to form their bulb, and if at the latter end of October, they are placed in a green house or cold frame, they will grow a little more. They will die downwards in December, and remain buried in the soil until the time your other roots begin to make their appearance, when I have no doubt they will also make theirs. Each seedling must be taken up at the end of the second year, and planted the same as you do your offsets. Each pod of seed ought to be sown in a separate pot and marked, that if you raise a good variety you may be enabled to trace its origin. Each seedling ought to be kept in a separate box or paper bag with the increase, so that when it blooms, if not possessed of good properties, you can throw the whole produce away, and if on the contrary, it should be a good one, you can then tell how many you have of it. Breeders which have bad bottoms should not be thrown away if they have yellow filaments in a bizarre and white in a rose or byblomen, as they generally break clean, but if the filaments are bad, there is not the least probability of its breaking out. Some breeders have good bottoms, &c. yet have tinged filaments, their imperfections detract from the value of the Tulip, as nothing looks so well in a good formed Tulip as the filaments to correspond with the rest of the properties.

Seedlings generally bloom the fifth or sixth year, Some make their appearance in a rectified state, and others of a self-breeder colour. In judging of the properties of breeders at Floral and Horticultural Meetings, the cup must be good as well as the bottom, and the colour, if a Bizarre, a dark chocolate, or brown. Polyphemus and Charbonnier Noir breeders, generally take the first prize in this Class. The rose breeder should be of a bright colour. The Queen Boadicea breeder, (or as it was named by some one who sold it as a new variety of Sherwood's) Duchess of Newcastle, ranks the first, having put aside the Glaphyra breeder altogether. The Byblomen breeders should possess, in addition to cup and bottom a good dark colour. As there are so many varieties of this class, it is impossible to single the best out.

Many Florists pretend to have a secret method of breaking breeders into colour. There is none better than the following. After you have grown your seedlings up to maturity, that is a blooming state, plant them for one year twenty or thirty miles distant from where they were raised, and the next year plant them at home in maiden soil, and by so doing you will break

several into colour. I have tried old mortar pounded fine and riddled through a five riddle, and about one-third of this mixed well with three-fourths of maiden soil, has broken the several breeders very fine. I have also taken them up in bloom, and placed them in the same: this also has answered my expectations the following year. Change of soil, is after all, the best means which I have tried yet.

I had omitted to mention in its proper place that each Tulip seed will produce a distinct variety, and that many of them in a breeder state, cannot be distinguished from each other, but when broken have proved distinct varieties; this shews the necessity of keeping each root separate as before mentioned.

ARTICLE. II.

ON THE CULTIVATION OF THE LYCHNIS FULGENS,

BY META.

THE *Lychnis Fulgens* does not appear to be so well known, or so generally cultivated, as its beauty deserves; and finding no other notice of it in the Floricultural Cabinet, than an inquiry in the first volume, as to its preservation during the winter, I forward the following observations on its culture, being a pan which succeeded well last year.

In the beginning of March the seeds were sown in a light rich soil, about six in each half-pint pot, and then placed in a gentle hot-bed: the seeds did not germinate quickly, and not more than half came up. (I think it does not seed freely, as I see none advertized in your various lists for this year.) When the young plants were about three inches high the pots were removed into the greenhouse, and the seedlings were never disturbed, as I have found by the experience of the previous year, that they were very impatient of removal. When they seemed to require it, the soil was carefully taken out from the top of the pot, and replenished with a mixture of one third loam, one third peat, and one third leaf soil: they were sparingly supplied with water; with this method of treatment, they flowered beautifully the following July. After flowering they only required sufficient water to enable them to perfect their seed, and to prevent the soil from baking, and then were suffered to subside into that state of rest, which all tuberous roots require. Before winter the roots had

grown considerably, and were then repotted in a mixture of two parts loam, one part peat, and one part leaf soil: they were placed in a dry cool part of the greenhouse, and have now (Feb. 3d.) sent out three or four stems from each root, those from last year's seedlings being three inches high, those from the previous year's six or eight.

In the summer of 1836, I put out into the open border, one or two seedlings raised the previous spring, but the transplanting checked their growth, and the stems died down. The root of one however survived, though totally unprotected, and flowered in the summer of 1838, though not so finely as those kept in pots in a cold frame during the winter, and removed into the greenhouse in spring.

Loudon in his *Hortus Britannicus* states the *Lychnis Fulgens* to be a native of Siberia, introduced into England in 1822; it may therefore be supposed hardy enough to be ranked amongst our border plants, but its beauty will well repay for a little extra care.

I think probably, seeds sown in the border and protected by a glass until frosts are over, would succeed, and during the winter, some manure, or coal ashes over the roots might be sufficient, but as mentioned before, one plant withstood the trying spring of 1837, without any protection whatever. Being a tuberous root, the best time for dividing it would be the autumn, or before potting it for the winter.

I would scarcely believe the report I received with any seedlings in 1836, that the colour was equal to that of *Verbena Melindrus* while the blossom was an inch across: but this far from being an exaggerated description, was quite correct as to the brilliancy of the hue, and below the truth as regards the size of the flower, mine being about two inches across; and when two or three were open at the same time they were almost too dazzling to look at, for long together.

ARTICLE III.

ON THE CULTURE OF GLADIOLUS PSITTACINUS

BY W. W.

HAVING derived much useful instruction from the perusal of the *Floricultural Cabinet*, which I have taken in from its commencement, induces me to request you to insert, in an early number,

the particulars of the culture of the *Gladiolus Psittacinus*. May fine large roots, when planted in the open ground, be depended on flowering? if so, at what time should they be planted? If potted and raised in a hot-bed, do they require much or little water? in short, should they be well watered under all, or any circumstances? I presume that the full grown roots should be taken up in the autumn: as they do not die down early, perhaps the end of October would be the best time.

As to the young roots I observe that they come up luxuriantly in the spring when left in the ground; I succeeded tolerably well with these roots last year by raising them first in a hot bed, being potted the beginning of March, then placing them in a greenhouse till the beginning of June, when they were planted in the borders; but they did not quite realize my expectations, having seen them growing more luxuriantly at the Horticultural Gardens, therefore I am desirous of knowing the best method of proceeding with them. Some roots that I left in the ground through the winter, rotted, at least the hearts dwindled away, sending up an immense quantity of young ones in their places.

It would be desirable to grow them without first raising them in a hot bed: but of those that I have planted in the ground few have flowered. I believe they require a sunny situation.

Clapham, 12th January, 1838.

ARTICLE IV.

ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS.

STOVES, GREENHOUSES, &c

(CONTINUED FROM PAGE 72)

HAVING, I think, fully shown, the advantage possessed by wood over cast iron in those very essential points; the better growth of plants, and the saving of fuel, glass, and labour; I shall now add to these observations a few words on the various systems of heating houses; that is to say, with common flues with steam, and by the circumvolution of hot water. The last named method is now becoming very general, and is admitted by all scientific men to be the best, because it is the safest; the most certain, and no doubt when perfectly fitted upon a good principle, it is also the most economical as regards the expenditure of fuel and

the application of labour. Entering, therefore, on this all-important subject, I shall confine my observations in the first place to advantages of hot water over steam, which are, in my opinion, very great, particularly where coals are expensive; for, to generate steam an enormous consumption of coals, or oven coke, which is nearly as expensive, is indispensably required, as a weaker fuel will be found of no avail. This is the first evil of the steam system, and the second is, that a man's time must be nearly, if not wholly employed in affording that constant attention which is necessary to keep up the fire. Then in the third place, there is a considerable loss not only of time, but of fuel also before the pipes become filled with steam. This is a very important part to which, perhaps, due attention has not been paid, for it may not be generally known that steam travels through the pipe in a time no shorter than it requires to make them nearly as hot as itself; for steam, the instant that it comes in contact with a body colder than itself becomes condensed, and its onward motion is of course impeded. Again, the moment the fire becomes too weak to keep the water at the boiling point, so that steam may be generated, it immediately ceases to furnish heat to the pipes; consequently the pipes soon become cold, and this is the fourth evil of heating by steam, which is avoided by the use of hot water; for the instant the fire is ignited and the water gets warm, the particles of the fluid are set in motion, and circulation in the pipes commences, and continues until the whole of the fuel is consumed, or so long as there remains any heat in the furnace, in the bricks, or in the boiler. Still further, I have found two pipes each four inches in diameter when filled, the one with water at a heat of 200 degrees, and the other with steam, the one with the hot water would contain a much greater and more enduring body of heat than one filled with steam; and I have no doubt that if, when both pipes are heated up to the stated temperature, the fires were suffered to expire, the pipe containing steam would cool as much in one hour as the hot water pipe would in six or seven hours. These facts are stated from accurate observation, frequently repeated, and from exact calculations, very severely tested; they may, therefore, be considered to demonstrate in the last place, the decided advantages which the plan of heating by the circumvolution of hot water passes over the rival system of heating by the diffusion of vapor. To the superiority of the hot water plan, as to economy, both of fuel and

labour, I may be allowed to bear witness, for during the last fifteen years I have devoted the best energies of my mind to the subject. Throughout that period I worked four steam boilers, and had under my own eye the direction and application of no less than six of the most approved systems for raising temperature by means of hot water. This extensive experience and the opportunities it afforded of drawing an impartial judgment on the merits and defects of all the different systems, added to a natural taste for, and love of experiment, directed me to the construction of my economic egg shaped, wrought iron boiler, which has not only received the direct approbation of every engineer who has witnessed its operations, but is considered by them and all who have adopted it, as the most simple and economical of all the plans as yet submitted to the public. So confident am I in its superiority, that I always offer a guarantee to all who employ me to fix it, that I will keep it in repair and take the responsibility of its acting properly for three years, provided that it be fairly used. On such conditions, those who favour my invention cannot run much risk nor entertain any apprehensions as to its efficacy, for surely three years will afford them ample time to decide upon its merits and advantage. Its chief features are its expanse and the economy of its arrangement, &c.

Aware as I am that any information from practical men, explanatory of the cause of improper working in so many hot water apparatuses, will be acceptable to all gardeners who have the management of them, and who peruse your truly-valuable publication. I will briefly state a few of the principal causes to which failures are attributable; among which none are more difficult to overcome by persons unacquainted with the hydradynamic principles on which the action of hot water is regulated, than the accumulation of air in the pipes. Indeed, unless proper arrangements are made for the escape of the air which is evolved from the water when at a boiling point, no apparatus can act properly. Now, from some accidental cause, even in the best constructed apparatus, this air may collect and lodge in the corners or angles of the pipes, particularly when they have to rise and fall; this should be particularly attended to, as the want of due regard and necessary precaution in this particular, is in my opinion the principal cause of the many failures with hot water, and the reason why this description of apparatus is sometimes spoken of unfavourably; for I have invariably found from practi-

cal experience that water will not circulate beyond the point where there is an accumulation of air, and the more powerful the attempts made to remove the obstruction by increasing the strength of the fire, &c., the more likely is the apparatus to work improperly, and to cause an overflow of water in the supply cistern. Therefore, as soon as it is discovered by the gardener or person having the management of the fire, that the water does not circulate regularly, he should trace the water by its warmth along the pipe to the place where he finds the metal cold; and then in the next bend, or angle, should he not find an air tap, I should recommend him to procure a blacksmiths drill and to have a hole made in the pipe, when he will find the air to pass off rapidly and the water to follow instantly. Then, should he not be prepared with an air pipe, a small wooden plug would suffice until an opportunity offered to fix one properly; as in all probability it might be many months and perhaps years: if the cistern be carefully and continually attended to, before such an accident could occur again at that particular joint or bend, I would, however, strongly recommend that in every apparatus ample provision should be made for the escape of the air, at every bend where it is likely to collect or lodge, for I have witnessed during the time I had the management of six systems of hot water, that from some unknown cause, an apparatus which had worked properly for one or two years, would suddenly get out of order, when, on tracing the pipe as before described, as far as I found it warm, I have then, on drilling a hole at the first turn or bend where the pipe began to feel cold, found an accumulation of hydrogen carbonic acid gas, the heaviest of all the gasses lodged in the angle, and as soon as this was allowed to escape, the apparatus worked as regularly as usual. To remove this difficulty which to persons unacquainted with the cause of the obstruction, would appear formidable, nay almost insurmountable, not more than ten minutes space was sacrificed; and on interrogating the man who had the management, as to whether he had allowed the cistern to fall below the proper level, I discovered that the derangement had been caused through his negligence and inattention, in having suffered the water to sink below the level of the top pipes, which of course left a vacuum for this foul air. I would therefore advise all persons, when not using the apparatus, either to draw the whole of the water off, or to keep the cistern as full as when in use; this precaution will prevent the air from

collecting, but when the boiler is filled again, they should be careful to leave the air taps open, until the water begins to flow out, or, till the boiler is full, to prevent a repetition of the inconvenience. There is also another highly important arrangement connected with hot water apparatuses, property of the metals, which should be attended to with great care. I mean the allowing of a sufficient longitudinal expansion for the pipes on their becoming hot; as it should be born in mind, that iron pipes when heated to 200 degrees, will expand nearly 2 inches in a length of 100 feet, and as a proof of the necessity of attending to this part, I may relate a circumstance which fell under my observation. A few years ago a nobleman's conservatory in Hampshire was heated with hot water, at the expense of between three and four hundred pounds, and the pipes of the boiler were introduced through the stone that formed the foot-path, in which holes were cut, just large enough to admit a 4 inch pipe, but not of sufficient diameter to allow, for the expansion of the metal; and I well remember, that in consequence of this oversight in fourteen or fifteen different situations where the pipes had to pass through the stone, the joints burst. In each of the 80 feet lengths of pipe, which amounted to about seven or eight lengths altogether, one third of the joints burst, which had only been used three or four times at intervals, it continues to crack to this hour and will do so until they allow room for the expansion of the pipes where they pass through the stone. Having thus given a few brief instructions for the management of hot water apparatuses, and knowing there exists a great diversity of opinion relative to the quantity of water a boiler should contain, and of the dimensions of the water way both in pipes and boiler, so as to secure a regular and lasting temperature, I hope it will not be considered presumptuous in me to offer a few observations on that subject, and leave the impartial reader to decide the question. It is natural that every constructor of hot water apparatus should be prejudiced in favour of his own peculiar plan, the child of his own mind; here it is that the prescribed dimensions of the conducting pipes, vary from $\frac{1}{2}$ an inch to 5 or 6 inches in diameter, according to the different plans of different individuals. I shall merely give my judgment on the proper sizes, without commenting on any peculiar plan. It is my opinion that hot water apparatus, to answer all the desired purposes, should be so constructed as to avoid either objectionable extremes; since

pipes of too large or too small dimensions are equally to be avoided, and this for reasons which I could easily adduce, were it not that I desire on this occasion to confine my remarks to boilers formed of a series of pipes, varying from half an inch to two inches, which I admit have a great advantage over boilers containing large bodies of water, in as much as they become hot much more quickly, but then it must be recollected, that the larger body when once heated, will remain hot twice or three times as long as the other. And I have proved by observation that a 4 inch pipe, which contains double the quantity of water which a 2 inch pipe is capable of receiving, in a house of the same temperature, will retain its heat for more than double the length of time. Moreover, when boilers are used that have such small water way and small pipes, they require more attention, and cannot be left at night with the same safety as boilers and pipes containing larger bodies of water, seeing that the former cools so much more rapidly than the latter. Nevertheless, to err in the other extreme, by having boilers and pipes to contain very large quantities of water, would be a great waste of fuel and by no means calculated to answer to the satisfaction of all parties, so well as a boiler and pipes of a medium size; it is my opinion, therefore, that in neither boiler nor pipes should the water way be less than 3 inches, nor more than 4 inches, and the boiler should be so constructed without complication as to expose the greatest possible surface to the action of the fire, this would be found the most economical shaped boiler for fuel and effect, for I have always remarked, that the great object of all persons who heat their houses with hot water, is the saving of fuel, &c., which is very considerable, when compared with the expense attendant on a badly constructed flue, moreover, an opportunity is offered of heating several houses at the same, or very little more expense: this I have always considered of the greatest importance, particularly, when a gentleman's establishment is situated a great distance from coal mines, and in all my arrangements with hot water I have always continued to have the body of water in the pipes which run through the house, as it is there that the gardener requires a permanent and lasting heat, this it is that induces me to advocate the use of 3 inch and 4 inch pipes. Moreover there are great objections to the use of small pipes varying from half an inch to two inches, particularly when the boiler (as is the plan of some) is formed of a series of pipes, in such cases their

interior become in course of time "furred" up, from the incrustation formed from the depositions of the various lathy matters held in solution by the water, which naturally causes an accumulation of alkaline earths, &c., &c., which in time closes up the water way. I have thus freely expressed my opinion on the demerits of pipes of small calibre; but it must not be thence inferred that I shall err on the other extreme, as that would be attended with much sacrifice of fuel to the proprietor, and great inconvenience to the gardener. For if boilers and pipes are used capable of containing unnecessarily large quantities of water, there will be a great waste of fuel before any heat is communicated to the house, and, perhaps, a valuable crop of fruit or plants may be destroyed through the gardener not having a proper command of heat, in order to prepare against those alterations in the weather so frequently sudden and unexpected in this changeable and uncertain climate.

I have found in the course of my experience and observations, that more especially, in the months of October, November, and December, but with less frequency at all periods of the year, that up to the hour of 12 o'clock at night, rain may fall in torrents and the gardener may naturally conclude, that during the night, no fires will be required, either for greenhouses or conservatories, but how great must be his trouble and surprise to find in the morning eight or perhaps ten degrees of frost. Now this trouble and inconvenience I have frequently experienced; therefore for the benefit of all parties and the protection of plants, &c., I beg to repeat here the opinion I have already given, that, for an apparatus to answer all purposes, boilers with a medium size, with water ways not less in any part of the boiler than three inches and not more than four, will give the gardener a sufficient command of heat, and afford him an opportunity of protecting the perishable property entrusted to his care, without subjecting himself to reproach, which is too frequently unjustly heaped upon him for loss of property, through circumstances, over which he could have no controul. For to limit a gardener to means, when much is expected, can only be compared to setting a man to dig who has neither legs nor arms.

(To be continued.)

ARTICLE V.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 64.)

But it requires considerable ingenuity to hinder these elevations from having the appearance of artificial ones, which would make them as ridiculous as a circular lake on a lawn. As the removal of earth is attended by the expense of labour only, this is one of the most advantageous manners of laying out money in the formation of a shrubbery, since five feet lowered in one part and raised above will give a slope or bank about double that height. A considerable effect will thus be obtained; for in a flat country a small elevation gives a great command of prospect, and adds itself considerably to the beauty of a landscape, especially when planted with lofty growing trees, as larches and pines. An undulating appearance may be given to level ground, by judiciously planting the trees and shrubs.

The too general error of planting close to the dwelling-house should be avoided; for although such a plantation may have a pretty appearance in the infant state, a few years' growth will cause it to cast a gloom over the apartments, and keep off a free circulation of air. Besides, as plants give out a noxious air in the evening, it should be more particularly guarded against in this moist atmosphere.

The training of trees to the walls of houses is also objectionable, as they cause damp, harbour insects, and collect leaves and other substances that become offensive by their putrefaction, whilst the view of the plants themselves cannot be enjoyed from the windows. However, all offices, out-houses, and unsightly buildings, may be covered with vines and ornamental climbers.

However small the plantation be, those abrupt terminations which mark the limits must not be permitted. The shrubbery should harmonize with the surrounding scenery, and appear to blend with it into one.

The plants which stand nearest the dwelling must be of the dwarf kind, and of the most beautiful sorts. The trees, also should be selected so as to correspond with the style of building. The villa shows best when surrounded by light ornamental trees, such as the birch, the acacia, the sumach, the laburnum, and cypress: and a clump of poplars may sometimes be introduced, so

as to break the line with good effect. The cottage may have more rustic trees; while to the castle belong the oak, the ash, and the pine, the mansion admits of all at their proper distance, and in suitable situations.

One of the most important things in planting is to attend particularly to the shades of green, especially where the view from the house or lawn catches the trees. Flowers which Pliny calls the joys of the trees, continue but for a short period, in comparison to the duration of foliage; therefore, the picture should be formed by judiciously contrasting the greens. Even the effect of perspective may be considerably increased by the proper arrangement of hues. Trees whose leaves are grey or bluish tint, when seen over or between shrubs of a yellow or bright green seem to be thrown into the distance. Trees with small and tremulous leaves should wave over or before those of broad or fixed foliage. The light and elegant acacia has a more beautiful effect when it's branches float over the firm and dark holly or bay-tree. In some situations the bare trunk of trees may be shown; in some, it should be concealed by evergreens and creepers. Vines, also, may be suffered to embrace it, and form natural festoons where the extent of ground will allow of wilderness scenery. In all situations, nature may be assisted, but should never be deformed by clipping; for ingenuity ought to be employed to disguise art, not to expose it.

The beauty of plants cannot be displayed when they are too much crowded, as they are then drawn up into unnatural shapes. Therefore, the oftener open spaces can be admitted, the more will the shrubs exhibit themselves to advantage, and the more cheerful will be the walk; for it becomes insipid and gloomy when confined for any distance. The winds also claim our attention. Care must be taken so to arrange the position of the trees, that only those gales which are most congenial to the growth of particular plants should be allowed access to them.

The undulating appearance of a plantation will be considerably assisted by a gradual progression from the lowest shrub to the highest tree, and again, from the highest to the lowest. But as some shrubs will not flourish under certain trees, their respective situations demand consideration. These shrubs may indeed exist under such unfavourable circumstances, but their unhealthy appearance will never be pleasing. Where the shade of any tree is too powerful for laurel or privet to thrive, ivy may be planted

with advantage, if it be desirable to cover the ground with evergreen.

In proportion as the shrubbery or plantation recedes from the dwelling, it should become more rural in its character, more especially if the house be in the cottage style. Here climbers and such plants as require the support of others, are to be introduced. The most delightful groups in a pleasure-ground are generally those where nature, freeing herself from the shackles of art, depends only on her own assistance for support. Her beauty is chiefly to be seen there where her various creations combine spontaneously, and without restraint.

The means by which these plants raise themselves up, so as to offer their flowers to the sun, are as various as they are curious, and they seldom blossom whilst trailing on the ground. The ivy and bignonia ascend by the help of little fibres, which fix themselves to the bark of trees or crevices in walls so tightly, as to render their disengagement a difficult thing to be accomplished without injury to the trunk or building they are attached to. The honey-suckle like the hop, twines itself spirally around the trunk or branches of trees, and often clasps them so closely, as to make an impression on the hardest timber. Others, as the vine and passion-flower, rear themselves by means of corkscrew tendrils, which hold so fast, that the strongest winds seldom disunite them from their support. Some plants climb by means of a hook in their leaf-stalk, or have a kind of vegetable hand given them, by which they are assisted in mounting, as the pea and several others.

To return from this digression.—The sombre, gloomy walk of yew, cypress, or holly, should lead to the spot from which there is the most beautiful prospect, or to the gay parterre where Flora has diffused her flowery beauties; as the contrast, particularly if sudden, adds greatly to the cheerfulness of the terminating view.

Bad taste is seldom more conspicuous than when we see trees or plants marshalled in regular order and at equal distances, like beaux and belles standing up for a quadrille or country dance. Where the situation will permit, four or six lilacs should be grouped in one place, and as many laburnums in another so as to give effect in various parts by a mass of colour.

The guelder rose should appear as if escaping from the dark bosom of evergreens, and not a plant should be set in the ground

without adding to the harmony of the whole. A shrubbery should be planted, as a court or stage dress is ornamented, for general effect, and not particular and partial inspection. Boldness of design, which seems to be more the offspring of nature and chance than of art and study, should be attempted; but though boldness is what the planter should aspire to, all harshness, or too great abruptness, must be avoided, by a judicious mixture of plants whose colours will blend easily into one another.

The most beautiful shrubs should occupy the most conspicuous and prominent places. For instance, a projecting part of the plantation should be reserved for the purple rhododendron, the flaming azalea, and other bog plants. Here, it must be observed, that unless proper soil be provided for these American plants, the cost of the shrubs will be lost, as they will soon decay when not placed in earth congenial to their nature. With these shrubs may be planted the hardy kinds of heath, as the same soil suits both species. With respect to evergreens, considerable judgment is required, in order to relieve their uniform appearance during winter. This may be done, by skilfully arranging different kinds, and those with variegated leaves, or such as retain their brilliant berries during the cold months.

However, a well planted shrubbery depends not so much for its beauty on the expense or rarity of the plants it contains, as on the selection of trees and shrubs which succeed each other in blossoming throughout the year, or whose various-coloured fruits grace them for the longest duration of time. We shall, therefore, not dwell upon those plants alone that are the ornaments of the summer season; but also point out some that will contribute to the gaiety of morning and evening of the year; so that the gloom may be banished at all time as much as possible from the grove, and nature's repose shortened between the plaintive good-night of autumn, and the cheerful good-morrow of spring.

The hazel and filbert are amongst the number of those trees that blossom the first; and although their crimson female flowers, which appear about the middle of January, make but little show, yet they should have a place in the shrubbery to display their catkins, that hang with such peculiar grace from the branches, at a season when scarcely any other plant or shrub offers a flower, excepting the rosemary.

(To be continued,)

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1, MORNA NIVEA. *Snowy.*

[Bot. Reg. 9.

ASTERACEÆ SYNGENIA POLYGAMIA ÆQUALIS

An interesting half hardy annual, raised by R. Mangle's, Esq. from seeds sent from the Swan River colony. The present species very much resembles *M. nitidia*, excepting the flowers, which are white, whilst those of the other species are yellow. The flowers of this genus are of the character, usually termed everlasting, keeping for years after being gathered, which gives additional interest to their neatness. The flower stems rise to about half a yard high, produces a profusion of blossoms during the summer and autumnal montas.

2. PASSIFLORA NIGELLIFLORA. *Nigella flowered Passion Flower.*

[Bot. Mag. 3635.

PASSIFLORIEÆ. MONDELPHIA PENTANDRIA.

Mr. Tweedie discovered this species at St. Jago d'Estero in 1835, and sent it to the Glasgow Botanic Garden, where it bloomed in the stove during last summer. The plant much resembles *P. citiata* or *gossypifolia*. The flowers are white, each about an inch and a half across.

3. THYSANOTUS PROLIFERUS. *Proliferous.*

[Bot. Reg. 8.

LILIACÆE. HEXANDRIA MONOGYNIA.

This very singularly beautiful greenhouse perennial was raised by R. Mangle's, from seeds sent from the Swan River colony. The flower stem rises about two feet, and bears two or three umbels of its singular fringed flowers, the umbels being two or three inches apart up the stem. Each umbel contains from eight to a dozen blossoms, and a blossom is near an inch across. The petals are of violet purple, having a lilac line up the middle of each. The edges of the petals are densely feathered with fringe. It is a very neat and desirable plant, well meriting a place in every greenhouse, *Thysamotus*, from *thusamotus*, fringed, referring to the edges of the petals.

4. ARISTOLACHIA SACCATA. *Pouch-flowered Birth Wort.*

[Bot. Mag. 364.

ARISTOLECHIEÆ. GYNANDRIA HEXANDRIA

This very singular flowering plant is a native of Silhet, and was sent from the Calcutta garden in 1829, to the royal Botanic Garden Edinburgh, where it bloomed last September. The plant is a twiner, growing to a considerable length. The leaves oval, heart-shaped, from a foot to fifteen inches long, and four to six broad. The singularly formed flowers are produced numerously in racemes; each flower is about five inches long, pouch-formed, the tube turning upwards from the middle, and bending parallel with the other portion of the tube, the inside of the tube is a whitish yel-

low. The mouth and throat of the tube of a bright golden yellow, with an edging of deep purple. The outer side of the tube is of a rosy white and pale purple.

5. *BORONIA CRENULATA*. *crenated leaved.*

Bot. Reg. 12.

RUTACEÆ. OCTANDRIA MONOGYNIA.

A very handsome flowering species, which is a native of King George's Sound, where it was discovered by Mr. Menzies. It bloomed in the greenhouse of Messrs. Lodiges's at Hackney, and forms a neat bushy plant, with deep green foliage. It produces a profusion of flowers of a bright rosy-red colour. Each flower is about half an inch across. This species deserves a place in every greenhouse. Like the rest of the species, it requires to be grown in an airy, and light part of a greenhouse. The most suitable soil for all the tribe is a sandy peat, using a free supply of drainage, and frequently shifting each plant into a pot a size larger. If over-potted they often die. Baronea, so named in compliment to Boranes, who was servant to Professor Afzelius, this faithful servant went with his master to Sierra Leone, where he died.

6. *COMUS SCABIOSOIDES*. *Scabious-like.*

Bot. Reg. 15.

ASTERACEÆ. SYNGENESIA SUPERFLUA.

A native of Mexico, from whence seeds were sent to J. F. Dickinson, Esq. and by that Gentleman presented to the Horticultural Society of London, in whose garden it bloomed last year. The flowers are produced numerously, each blossom being about an inch and a half across, of a deep crimson inside with the stamens, forming a yellow eye; outside of a deep rosy red. It is a very handsome species, well worthy a place in every flower Garden. It is supposed very probably, that the flowers of the genus will become double, similar to the Dahlia. There are several other species of this pretty tribe, not yet introduced into this country, with pink, bright yellow, or deep purple flowers. There are now annually importations of Mexican seeds into this country, we may therefore conclude that seeds of these beautiful plants will soon be introduced.

7. *ERICA CHLOROBOMA*. *Green tipped Heath.*

[Bot. Reg. 17.

ERICACEÆ OCTANDRIA MONOGYNIA.

This very pretty flowering species is cultivated by Mr. Young, nurseryman Taunton, Somersetshire, where it has bloomed. The plant is of an erect habit, and the flowers are produced upon the young shoots in vast profusion. The flowers are near three quarters of an inch long, of a beautiful crimson colour, having a green tipped end. They hang pendulously along the shoots. It is a very neat and desirable species.

8. *ERICA FLORIDA*; var. *CAMPULATA*. *Drooping round headed Heath.*
(Bot. Mag. 3639.

This very beautiful flowering heath is cultivated in the superb collection at Bothwell Castle, where it was raised from seed by the very skilful gardener, Mr. Turnbull, in 1835, and though but two years old, the plant is near a yard high, and has produced a profusion of blossoms, of beautiful rose colour, and their campanulata form, show them prettily to view. Each blossom is about a quarter of an inch long, and the same at the mouth. It is a very desirable variety of this interesting genus.

9. GOVERIA LILIACEÆ. *Lilly flowered.*

(Bot. Reg. 13.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA. Synonym MAXILLARIA LILIACEA.

A native of Mexico, growing under the shade of trees, or sometimes grows over their roots. It is a tuberous plant, having the habits of *Bletia*, the flower stem reaching about a foot high, it is sulphur white, spotted and streaked with reddish-purple. The first notice of this plant was by M. Hernandez, who describes it by the name of *Iztactepetzacuxochitl* Icohueyo. The plant is very rare in this country, and probably in no collection but that of George Barker, Esq. of Birmingham.

10. MAMILLARIA ATRATA, *Dark green Cactus*

ICOSANDRIA MONOGYNIA.

A very handsome flowering species. This truly interesting and singular tribe of plants grown in the celebrated collection of Mr. Mackie of Norwich. The flowers are produced numerous around the top of the fleshy trunk. Each blossom is upwards of an inch across, of a bright rosy red colour, with the anthers forming a yellow eye. The singular form of the plant, and the arrangement of the numerous pretty blossoms contribute to recommend it to every cultivator of this tribe of plants.

11. PENTSTEMON CRASSIFOLIUS. *Thick-leaved.*

(Bot. Reg. 16.)

SCROPHULARIACEÆ. DIDYNAMIA ANGIOSPERMIA.

The late Mr. Douglas discovered this pretty species on the north-west coast of North America, who sent seeds to the London Horticultural Society, at whose garden it bloomed last year. The plant is of a suffrutescent habit, growing a foot high, quite hardy. It is a free flowering species, produced in racemes. Each flower is about an inch and a half long, of a pretty lilac colour. The lower part of the tube is of a bright rose colour. It is a very desirable plant for the flower garden, its dwarf habit, and pretty flowers alike recommending it.

12. PHILADELPHUS HIRSUTUS. *Hairy Syringa.*

(Bot. Reg. 14.)

PHILADELPHACEÆ. ISCOSANDRIA MONOGYNIA.

This species was found by Mr. Nuttall in Tennessee on the rocky banks of French Broad River, near to warm springs. It is a hardy shrub, growing not more than three or four feet high, blooming in the middle of July. The flowers are white, each about an inch across, without fragrance. It grows well in a rocky situation.

ON THE AURICULA.

In the three winter months from the 21st of November to the 21st of February, Auriculas do not require much of our care, beyond watering them occasionally, plucking off the dead leaves and covering them with mats, or a little coarse hay litter during the severe frost; and this covering ought more particularly to be given them in February, because their trusses then begin to appear, which, if frozen hard, will be detrimental to the bloom. They want very little water in the winter, and seem to be best when kept rather dry than otherwise in December or January. Early in February, if the weather is mild, you may give them a day's gentle rain, and this may be repeated, if necessary during the month. You may now give them manured water twice, and do the same again in March, allowing a week between each watering. Top dressing is requisite.

PART III.

MISCELLANEOUS INTELLIGENCE

QUERIES.

ON PRODUCING DWARF COCKSCOMBS.—I shall esteem it a great kindness if you, or any of your correspondents would give me the particulars of a mode of treatment, or the best method of producing dwarf cockscombs, so as to retard the protrusion of the flower stalks, so that they may become of greater strength. I have for several years followed the rules laid down in Abercrombie's Practical Gardener, but invariably had them drawn up from nine to fifteen inches in height; if you or any of your correspondents would be kind enough to inform me through the medium of your valuable Cabinet how they may be prevented from being drawn up, likewise the distance they ought to keep from the glasses, will be conferring a favour on

A NEW SUBSCRIBER.

ON SOWING ANNUALS.—Being a great admirer of annuals, and as the season for sowing them is approaching, I hope you will devote some pages of your Cabinet to the method of cultivating them with the greatest success.

I shall be glad to know the soil that best suits the generality of those recommended in your lists. And it would be very useful if in the list you are giving you would distinguish those which are improved by being transplanted; and on the other hand, those which are the better for being allowed to blow where they have been sown.

Can you inform me how it is that seeds, although carefully saved from the best flowers, (as of Asters and Marygolds, for instance) nevertheless produce inferior flowers the following year? Am I right in attributing the mischief to bees, of which great numbers are kept in my neighbourhood?

Will you inform me also how to prevent double Polyanthuses from losing colour and becoming single—a calamity which occurs in my garden?

AN AMATEUR,

ON A FLOWER AND KITCHEN GARDEN.—A Subscriber will be very much obliged to the Editor, if he will in his next number mention what he considers the best practicable and easy method to give to an intelligent, but not much experienced gardener some instruction as to the general management of a Flower and Kitchen garden, and the best method of growing the different kinds of vegetables, pruning and other ordinary operations.

Is the "Adelaide d'Orleans rose, figured in the Cabinet of last September, a climber? The writer has had two young plants sent him, in pots, which from the character of the stems, &c. appear decidedly of the climbing sort, and not at all corresponding with the figure given in the plant just mentioned. An answer to this query will much oblige

CLERICUS.

ON THE VIEUSSEUXIA, &c.

IN Loudon's "Hortus Britannicus" (about the 22d page), under the article *Vieusseuxia*, several species are enumerated. One, the *V. Pavonica*, (formerly called *Morcea Pavonica*) has a reference to a certain page, in Curtis's Botanical Magazine, where it is figured in its proper colours; and the colour

of the blossom is also put down in the proper column. There is also the *V. Glaucoptis*, (formerly called *Iris Pavonia*) with references to the figure and colour. I last year applied, by means of a friend, at ten different florists' shops in London, for some of each of these bulbs: I received some bulbs, which were called *Iris Pavonia*, they bloomed very well, and proved to be the *Vieusseuxia Glaucoptis*, a very pretty and curious flower. I this year again applied (as my friend tells me) to all the London Florists, who were shewed an extract from Loudon, and also from "Sweets' *Hortus Britannicus*," which agrees with Loudon, and the answer was, that "they were the same." Now, Sir, this is impossible, for neither Loudon or Sweet would give an account of the two different species if there were only one, nor would they give the names, *V. Pavonica*, olim *Morœa Pavonica*, and *V. Glaucoptis*, olim *Iris Pavonia*, nor the colours of the two flowers, nor references to two figures, if they were only one and the same. The *V. Pavonica* is like the *V. Glaucoptis*, excepting as to the colours, the former being, as I am told, very beautiful, as coloured in the plate referred to.

As I presume you, as well as many readers of the Cabinet, must be well acquainted with Loudon's and Sweet's books, and also with these two several species of *Vieusseuxia*, I will feel obliged if some person will have the goodness to inform me, in the earliest Floricultural Magazine, where I can procure some *V. Pavonica*. I have plenty of the *V. Glaucoptis*. In this year's Catalogue of Bulbs, published by Lochhart & Co., Cheapside, there is no mention of any *Vieusseuxia* whatever; but there is *Iris Pavonica*, and the bulbs are very fine and cheap. I had some from them last year and they bloomed well. I believe the London Florists, as they call themselves, are far from being well informed in Floriculture, or there would be no omission of the Genus *Vieusseuxia* in their catalogues; nor would they say that the *V. Pavonica*, and *V. Glaucoptis* were one and the same, with the "*Hortus*" before their eyes, if they possess the books, which I very much doubt.

In "Aiton's *Epitome of the Hortus Reivensis*," page 16, there is noticed "*Morœa Pavonia*, Peacock *Morœa*, coloured in the Botanical Magazine, (Curtis's) table, 1247, brought from the Cape of Good Hope, in the year 1790. I believe this is what I want,

BURRIENSIS.

ANSWERS.

A LIST OF FLOWER AND GARDEN HERBACEOUS PLANTS,—Seing a query in the December Number of the Cabinet, requesting an early list of Herbaceous plants that will stand the changeable temperature of our climate, I have taken the first opportunity of obliging your correspondent,

Those marked (o) are rock plants.

Acanthus	Aconitum
mollis	pyramidales
spinosus	versicolor.
phinosissimus	decorum
illiciflans	rubellum
Aconitum	Achillea
hycotonomum	grandiflora
album	ptarmica
variegatum	ageratum.
Japonicum	speciosa
unicinatum	alpina
speciosum	serrata
virgatum	o calavennæ
formosum	rosea
venustum	nobilis

Adonis	Artemisia rupestris
vernalis	o pedemontanna
apennina	o caucasica
Agrostemma	o spicata
corrornaria	o saxatilis
Alchimella	Asclepias
o pubescens	tuberosa
o alpina	syriaca
o sericea	nivea
o hybrida	incarnata
Aletis	rubra
auria	Bellium
farinosa	minutum
Alyssum	Bellis
o saxatile	o sylvestris
o orieneale	o perenis
o argentium	o hybrida
o obtusifolia	Bocconia
o tortuosum	cordata
o vernale	Borayo
o montanna	o laxiflora
Amaryllis	crassifolia
Belladonna	orientalis
Ammobium	Calceolaria
alatam	o fothergillii
Arabis	Campanula
o proecox	o pulla
o ambigua	o rotundifolia
o alpina	o pumila
o albida	neglecta
o longifolia	tenuifolia
o crispata	Cardamine
muralis	pratensis
o stricta	auraria
o procurrens	Catanache
petroea	cærulea
Aralia	Centauria
nudicaulis	glastifolia
racimosa	alba
Aretia	macrocephala
o vitalana	alata
o alpina	Cerastium
Arenaria	o grandiflorum
o graminefolia	o tormentosum
o longifolia	o biersteinii
o formosa	o lanatum
o grandiflora	Cheiranthos
Aquilegia	o cheiri many varieties
vulgaris	o alpinus
canadensis	Chelone
atropurpurea	grandiflora
viridiflora	digitalis
viscosa	glabra
siberica	oblequa
alpina	Dianthus
formosa	barbatus
hybrida	o latifolius
Artemisia	o capitatus
o glacialis	

(To be continued.)

REMARKS.

UPON THE CRESTED AMARANTH, OR COCK'S COMB. *CELOSIA CRISTATA*.—The flowers of this plant are so numerous and small, and so closely set together on an irregular and flattish surface, that it frequently looks more like a piece of rich velvet than a vegetable substance. We do not find it placed in floral language, and have therefore given it as the emblem of singularity. It is a native of several parts of Asia, and is common in Persia, China, and Japan, where we are informed it is grown to such perfection, that the crests or heads of flowers are frequently a foot in length and breadth. The most perfect plant of this kind grown in England, was grown by Thomas Andrew, Knight, Esq. and sent by him to the Horticultural Society of London in October 1820, a drawing of this extraordinary flower is now to be seen in the library of that institution; the flower of this extraordinary plant measured seven inches in height, and eighteen inches in width, it was thick and full, and of a most intense purplish red colour.

In producing this singular plant, the first object was to retard the protrusion of the flower stalk, so as to give it as much strength as possible. The compost employed was of the most nutritive and stimulating kind consisting of one part of unfermented horse-dung, fresh from the stable, and without litter, one part of burnt turf, one part of decayed leaves, and two parts of green turf, the latter being in lumps of about an inch in diameter, in order to keep the moss hollow, that the water might have free liberty to escape, and the air to enter. There are varieties of Cockscombs with yellow, red, purple, and white corollas.

FLORICULTURAL CALENDAR FOR APRIL.

PLANT STOVE.—Still support the requisite degree of heat by fires at night, as the plants will now begin to show their blossoms, which should be encouraged as much as possible at this season. Fresh air, when the weather is favourable, is very necessary, and should always be admitted when required; this will greatly assist their flowering, and cause the new shoots to be strong and healthy. This month is the most proper time to pot such plants as may require it, taking great care to use such compost as is congenial to them, and use plenty of drainage. Any that do not require shifting into larger pots may have the surface soil renewed with fresh compost, which will greatly invigorate them, and also add to their neatness. The same directions respecting watering and cleanliness may be observed, as given last month. Still propagate all kinds of exotics by means of seeds, cuttings, layers, or suckers, according to the nature of the different kinds; insert them in pots and plunge them in hot-beds, which will promote their vegetation and rooting quickly and certainly.

GREENHOUSE.—These plants will now require large admissions of air at all times when the weather is mild, for as most of them will now be shooting freely, they must not be kept too close. The plants must now be looked over to see when water is wanted, and let all the plants be properly supplied therewith, as this is now a very necessary article, particularly when they are in the house; be careful of the succulent kinds. Let no decayed leaves or shoots be allowed to remain, but let such be taken off as soon as perceived; and all shoots that are of a weak straggling growth must be pruned more or less, as appears necessary. Let no weed, moss, or litter, be seen on the tops of the pots and tubs; and if any foulness be contracted on the plants, let it be instantly removed. In arch shrubby exotics of any particular kinds; sow seed in pots, placing them in a hot-bed; sow seeds of orange, lemon, &c. for stocks; also propagate by cuttings, layers or otherwise, and if placed in a bark bed in the pine stove or hot bed, they will be greatly facilitated in their rooting.

HERBACEOUS PERENNIALS, should now be divided and replanted; also

biennials, as Sweet williams, &c. should be planted for blooming this season.

CUTTINGS.—If old plants of Salvias, Fuchsias, Petunias, scarlet Geraniums, Verbenas, Heliotropes, &c., &c., were saved through winter, and young plants be required for turning out into open beds in the flower garden, &c., young shoots should now be taken off close to their origin upon the old wood, and be struck in moist heat.

ANNUALS.—Hardy kinds should be sown in the borders, &c. (See Vol. 1. p. 43 of the Cabinet, where particular directions are given) Tender kinds should have plenty of air admitted to them, whether sown in pots or upon a slight hot bed. (See Vol. 1. page 42, of the Cabinet). In order to have the plants of some particular kinds stiff and healthy, they should be planted off into small pots, boxes, or the open border, or slight hot bed, &c., so as to be fine plants for final planting in May. Many kinds of tender annuals, intended to ornament the greenhouse or stove through summer, will require potting off, or if done before this month, probably re-potting into larger pots.

AURICULAS.—Will bloom this month; they will require protection from wet and mid-day sun. The plants will require a free supply of water; if manure water be occasionally given, it will improve the size of the flowers; care should be taken not to apply it over the plant. When the trusses of flowers are formed if there are more flowers upon each than can conveniently expand, the small and centre ones should be cut out, so as to leave about six.

CAMPANULA PYRAMIDALIS.—Offsets or cuttings should now be taken off and be treated as directed in Vol. 1, p. 48.

CARNATIONS.—If not planted off last month, should now be done. (See Vol. 1, p. 23.)

DAHLIA.—Seedling plants should be potted off, one plant into a small or sixty-sized pot. Shoots, and cuttings from old roots should be taken off, where it is desired to increase the kind, and strike them in moist heat.

CHINA ROSE.—Plants of the tender kinds, as yellow, sweet-scented, &c., should now be placed in heat, in order to cause a production of shoots for striking, so as to increase the kinds when desired. (See Vol 1, p. 48.)

CHINA ROSE (hardy kinds.)—It is now the proper time to bud the varieties of China Roses; do it as soon as the bark will freely rise.

TRIVERANIA COCCINEA.—Roots of this plant should now be potted. (See Vol. 1, p. 177 and 223; articles on the culture. &c., are there given)

PELARGONIUMS.—Cuttings now struck will produce plants to bloom at the end of summer. (See Vol. 1, p. 88.)

PANSIES.—Plants will now be pushing shoots that will be emitting roots. Where it is wished to increase the kinds, it is a very suitable time for doing it, by taking of shoots, and planting them in a good rich soil, shading them for a few days at first.

POLYANTHUSES.—(See Vol. I, pages 23 and 132.)

TIGRIDIA PAVONIA.—The bulbs should now be planted in the open bed; choose a warm and sheltered situation.

ERICAS, (Heaths.)—Cuttings of many of the greenhouse kinds should now be put off. (See Vol. I, p. 48.)

MIGNONETTE.—To bloom from June should now be sown.

ROSE TREES.—When it is desired to have Roses late in the season, let them be pruned this month. (See Article in Vol. I, pages 23 and 206.)

SELF SOWN ANNUALS—which have stood the winter should be thinned, and where desirable some may be successfully transplanted.

REFERENCE TO PLATE.

The three Dahlias figured this month, have already been announced in our advertising sheets, that we need not add more in this place, than that each kind has been spoken of by competent judges to be equal to the description given of them.

Marchioness of Exeter's Cantata.

THE
FLORICULTURAL CABINET,

MAY, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE TULIP COMPOST.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON NEAR MANCHESTER.

Much difference of opinion has for a long time existed among Florists as to the best compost requisite to ensure a fine bloom of Tulips. I have consulted almost every work upon Floriculture, and I invariably find that manure is recommended in certain proportions, some of them placed at the bottom of the bed, others three inches below the bulb, and a few one-third mixed with maiden soil. Experience has proved that manure has a great tendency to cause Tulips to sport in color and cause them, as is termed by Florists, to be dirty. Preparations amongst Florists are like physicians prescriptions, not always infallible, for I find some varieties require a much stronger compost than others. I remember about nineteen years ago seeing a bloom of Tulips uncommonly fine in the soil, there was not a particle of manure. The garden having been made out of an old pasture field. Grass sods rotted down and broken small is the best compost that can be used.

My plan is as follows. I get grass sods three inches thick from an old pasture field which appears of a rich quality, and has not been disturbed for a number of years. The price in my neighbourhood is twopence per square yard; but latterly, from the land

being sold for building upon, I have been enabled to get a load for two shillings, and in a particular instance, I have given as much as five shillings. I pile them up in a square pile, and after they are a year old or upwards, I brake them up with a spade as small as I can, and afterwards pass them through a wire riddle with holes one and a half inch diameter, the soil being previously dug out of the bed fifteen inches deep. I put that portion which would not pass through the riddle at the bottom of the bed, and the others on the top of this, to within three inches of the surface of the bed, and upon this I plant my bulbs. This plan has been adopted by several gentlemen I could name, one of whom in 1836 won four, and in 1837, six silver cups in addition to other prizes. I have also experienced the same results, but not being a subscriber to the cups, I have of course only won in the classes. In 1837 at a meeting where were exhibited some of the choicest blooms from the first beds in Lancashire, I won three firsts and two thirds, and a *Roi de Siam*, which was unquestionably the finest bloom I staged, was stolen, during dinner, before it was judged. The whole of my bloom that year was good, and the flowers very large. As I said before I find this compost not infallible, I of course use the two following :

For flame varieties deficient in colour and breeder Tulips intended for exhibition

One-fourth old cow dung.

One-fourth old horse dung.

One-half maiden soil.

For those which are dirty, that is, too much colour :

One-third old lime mortar, sifted fine, and

Two-thirds of maiden soil.

In arranging my roots from my book to plant, I place in the box with a root of a breeder a green coloured paper : with a dirty flower, a white ; and with one deficient in colour, a blue. I take care to have a large Carnation pot of each compost, and when I find a bulb with a certain coloured paper, I take out the soil nine inches deep, where the bulb is to be planted, and fill it up again with the necessary compost, by so doing, I generally succeed. Roots of feathered flowers deficient in colouring do not require any other compost than the general one, as it is much better to have them too clean, than otherwise. This compost serves me for two years, the riddlings at the bottom of the bed being frequently mixed with the top soil during the summer

months, makes it equally as good, if not better, than it was previously. I take out about three inches deep of the soil, and cover the bulbs with fresh compost.

If these few plain remarks give satisfaction to your readers, I will send you shortly more articles on Florist Flowers, written from personal observation and experience.

(We feel confident they will, and be glad to have the other articles—CON.)

ARTICLE II.

ON THE CULTURE OF THE RANUNCULUS

BY J. B. W.

It is not my intention to deprecate the practice of professed gardeners, yet so often have I seen them fail in producing a good blow of this pretty little flower, that I cannot forbear offering the following remarks on the mode of cultivating it. Having a good collection of roots in a dry place, I prepare a bed in an open border and south exposure, merely by adding a little of well rotted dung to the common garden mould in the month of October. In February I turn this over to the depth of six inches, and incorporate the old dung well with it. In March I then plant the roots in rows nine inches asunder, and three inches distant in the rows; as soon as they spring, I give repeatedly copious waterings, which of course are not necessary in wet weather. The want of success in the proper flowering of this root appears to depend greatly on the insufficient supply of moisture in the early part of its growth.

When they are in bloom, I shade a little every day when the weather is very dry and hot, taking care, however, not to weaken the stems by such means. After they are done flowering, and as soon as the leaves are withered, and having beside me a bason full of water, I transfer the roots immediately from the earth to the bason, and then pick the withered stems, leaves, and rootlets from the roots, and having thoroughly washed them with repeated effusions of cold water, I dry them in the shade, and then hang them up in paper bags in the kitchen or other dry place till the planting season returns. By washing the roots clean all eggs of insects are carried away, which would, undoubtedly, whenever the sun poured forth his strength, have become living animals, and committed great ra-

vages on the roots, in many instances annihilating them altogether. Some growers, to obviate this, recommend that potatoes should be planted between the rows, so that they insects may attach themselves to that plant, but it must certainly be more preferable to remove them altogether which is most easily effected by washing their eggs from the roots. It has also been recommended to allow the roots gradually to dry with the earth about them, this they say preserves the eye of the root safe for the succeeding year; this is certainly the easiest method of all others for destroying the roots, because after they have become shrivelled the clay gradually crumbles from them, leaving the eye supported only by so many dry brittle fibres; but washed when newly taken up, the fibres, on drying, cling together and support each other from injury, and although when the season for planting returns, the roots appear very diminutive, still when we look two days after they are planted they are as much swollen as when they were taken up. I always spread the roots while washing them, although by this system the trouble attendant on the culture is a little increased, yet the certainty of a good blow (for I scarcely ever planted a root that it does not blow) more than compensates for all the trouble.

T. B. W. G.

ARTICLE. III.

A FEW OBSERVATIONS UPON SOME OF THE RECENTLY INTRODUCED ANNUALS.

BY META.

THE investigations that have been carried on, during the last few years, in different parts of the globe have added so many new names to our list of annuals, that a selection from them becomes almost puzzling, and a few remarks upon some of the species worthy of cultivation may not be uninteresting to the readers of the Floricultural Cabinet. Those chiefly are noticed that have been figured in the preceding volumes, all of which may be grown successfully, and though to many of your readers, I am aware the remarks will present nothing new, I trust they may offer something useful, especially as a correspondent in the Number for April, has requested information on the subject.

One of the very prettiest additions to our Flower-borders is

the *Gilia tricolor*, well figured in vol. 2., November; this is a hardy annual, and by sowing it two or three times during the year, it becomes almost a perennial bloomer, for it seeds freely, and they spring up where the plant was previously grown, sustaining the cold of a moderate winter, and flowering early in the spring; it requires to be kept in a compact clump to look well; the seeds should be sown very thin, as the plants flourish better than when transplanted singly; height about a foot and a half

Leptosiphon androsace, figured vol. 2. December: a dwarf annual, well adapted for being sown in a small bed by itself; the plant is at first very slender and delicate, but when it becomes established it sets out many side branches, and at the end of each, bears a head of flowers variously tinted in shades of lilac, it therefore does not require to be sown thickly, and is, perhaps, better for being transplanted; height not quite one foot.

Nemophila insignis, figured in vol. 2., December; a very elegant plant with bright blue flowers, and light delicate foliage. Though its name might lead us to imagine it to be "a lover of the shade," it delights in a dry sunny situation; it grows about a foot and a half high, its stems are brittle, and unless well secured to sticks; it is soon injured by the wind, but forms a pretty clump if merely suffered to run upon the surface of the soil. Perhaps it is most valuable as an ornament for the greenhouse in spring: two or three plants in each pot tied usually to a slender stick, look extremely well there, expanding its beautiful blossoms without danger from wind or rain, and continuing in bloom for some time

Ipomopsis elegans, figured in vol. 2., February, under the name *Gilia aggregata*, is not yet become a common plant. It is a biennial, sometimes flowering the first year, sometimes requiring a winter's protection before it throws up its flowering stem, which will rise to more than four feet in height, and is, when in bloom, extremely beautiful. When young the *Ipomopsis* is subject to the attacks of the red spider, and then becomes a dangerous inmate of the greenhouse. Though "*Gilia aggregata*," is given as synonym of *Ipomopsis elegans*, it does not seem to be the same plant, with many seedsmen; seeds sown under the former names both last season and this, having produced very different plants from what was wished.

Calendrinia speciosa, a very pretty plant for growing in a mass

or covering the surface of a small bed ; the leaves are succulent, and of a pretty green, and delights in a dry sunny situation. It is a more desirable species than *Calendrinia grandiflora*, figured vol. 2. February, which proves a straggling plant, flowering sparingly in proportion to its foliage, and its blossoms rarely opening more than one at a time on each stem.

Nolana antiriplicifolia, figured vol 4., October, may be ranked as a companion to the *Calendrinia speciosa* ; it grows rapidly and luxuriantly in strong soil, sending out its stems in all directions, and soon covering a considerable space. The leaves are succulent, the flowers light blue, rather resembling the *Convolvulus minor*, and like that flower, they close early. The seeds are produced abundantly, so that though they are only introduced into general cultivation about two seasons back, it may soon become a common plant.

Collinsia bicolor, figured vol 3, April. This is a very pretty hardy annual, growing about a foot and an half high, and flowering both abundantly and for a considerable length of time ; two or three plants of it in a pot, are useful for introducing amongst others, in a basket of moss, or ornamental vase upon a lawn : it produces a great quantity of seed, and self sown plants survived the winter of 1836 at Finchinbroke, Huntingdonshire, and flowered most luxuriantly early in the summer of 1837. As it throws out social flower stems, it should be sown very thinly. When grown in a greenhouse, the stems shoot up at first very rapidly and weakly, and require careful tying.

Eutoca viscida, figured vol 4., February. This is a dwarf annual, the foliage rather coarse in appearance, but the flowers which are produced in a cluster at the end of the stem are of a brilliant light blue, and when examined beneath a microscope, their structure is very beautiful. It should be sown in a tolerably large patch to look well, and rather thickly ; height scarcely one foot.

Escholtzia crocea, figured vol. 2., July. A very showy plant, which though when first introduced was considered an annual will flourish two or three successive seasons, and as it sheds a great quantity of seed, it spreads over a border. The roots being like those of a carrot, and growing deep, does not bear transplanting very well, but the seeds should be sown sparingly where they are intended to remain. The colour is rather too glaring to

form a bed of this plant alone, but it looks very well amongst other plants.

Delphinium sinense. This though but a new biennial, is well worth cultivation, its flowers are deep and a most brilliant blue, it has little foliage, but two or three plants of it placed together form a nice clump, and contrast well in a bed with other flowers. Its height is about two feet, it will bloom the first and second years well, but though the plant will continue longer, the flowers are apt to diminish both in number and depth of hue. It grows from seed readily, and will bear transplanting well.

So many excellent directions were given in the first volume of the Floricultural Cabinet, that little need be added here upon the sowing and management of annuals; a succession may be obtained by sowing a few of each kind in a hot bed early in March pricking them into pots, as they obtain sufficient size, and then turning out the ball of soil entire into the borders early in May; sowing once in the open borders in the beginning or middle of April, as situation or season may warrant, and then again the last week in May, or beginning of June.

Many of the half hardy perennials lately introduced, produce seed so freely, as to be treated as annuals, suffered to perish at the end of the season; amongst these the beautiful *Petunia violacea*, deserves the first place. A bed of this plant forms a most elegant ornament to a garden, self-sown plants spring up, when it has bloomed the previous summer, which, when transplanted to different parts of the garden, forms strong bushy plants, covered with flowers during the autumn. The *Petunia nyctaginiflora* will also spring up occasionally in the borders, and the flowers of these seedlings, are much finer than from cuttings of the same season.

META.

ARTICLE IV.

A REPLY TO OBSERVATIONS "ON RAISING TULIPS FROM SEED,"

BY MR. JOHN SLATER, LOWER BROUGHTON, NEAR MANCHESTER.

SOME observations have been addressed to me upon the article on raising Tulips from seed inserted in your April Number of the Cabinet, I very reluctantly reply to them, neither should I

have done so, had my assertions not been disputed. If the writer had tried the experiment of growing his breeders at a distance from home, as directed, or had procured soil of a different nature, even five or six miles distant, he would not have ventured to make the assertions. What I advanced in that article is from experience as well as personal observations made during some years. I will, however, state facts, which are stubborn things. In the year 1834, I planted sixteen named breeders, which came upwards of sixty miles from this place, six of which broke; 1835, twenty-two breeders, three broke and thirteen did not bloom; 1836, one hundred and seventy breeders, part named and part seedlings, twenty-two of which broke, and eighty-six did not bloom; 1837, upwards of seven hundred, as yet I cannot state how many are broke, but I perceive, from the mottled appearance of the foliage, I shall have a round number. I have also a number which were taken up in bloom, a number planted in old mortar and maiden soil, and some in my regular breeder compost. I will state the result as soon as it can be done accurately.

With respect to the observations on planting Tulip seed edgewise, I shall only say that this year I have plainly proved the superiority of the plan over the old system of sowing. I trust I have satisfactorily answered the observations, and would, in conclusion, advise the writer to be more careful for the future in contradicting others without being able to prove them wrong.

ARTICLE V.

ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS.

FOR STOVES, GREENHOUSES, &c

(CONTINUED FROM PAGE 72)

HAVING then explained my objections to pipes of too large or too small diameter, I shall in concluding these observations offer a few suggestions relative to the formation of the furnace and the apparatus generally; is a guide to persons who may not have had quite so much practical experience as myself, and among the first that I shall draw the Gardener's attention too, with all hot water apparatuses, for his own convenience and for the benefit of his employer, is, to see that the Mechanist or Apparatus fixer supplies a proper furnace door, which should not be less than one

foot square, for the convenience of cleaning-out, lighting and making up of the fire the last thing at night ; for it is impossible for any man to manage a fire properly with a furnace door such as are used to some hot water apparatuses that do not exceed six or eight inches square ; but if a good sized furnace door is used, the gardener is enabled in counties, where coals are dear and wood is cheap, to burn logs of wood or the refuse from the pruning of trees, where he only wants a little fire through the day ; but of course it must be understood that this description of fuel is not to be depended on in severe weather, nor for the making up fires for the night. Whatever description of fuel is used, however, I have always found it a great saving to gentlemen to have a moderately large furnace door, great attention being paid to its formation, in order to prevent the passage of air through the door between the boiler and the fire, the neglect of which causes a great waste of caloric or heat, as air will not support combustion until its temperature is raised to 800 or 900 degrees of Fahrenheit, therefore a current of cold air admitted between the boiler and fire through the door, has a tendency to counteract the power of the fire ; to obviate which double doors should invariably be used, and then if the boiler is so constructed and set as to expose (which is the great secret in the formation of all boilers) a large surface to the action of the fire by means of the construction of the flues round it in such a way as entirely to consume the whole of the caloric or heat before it escapes into the chimney, the greater will be the saving of fuel, and the more powerful and effective the operations of the apparatus altogether. Indeed I have no hesitation in saying if a proper quantity of pipe is used so as to give a sufficient quantity of surface for the command of temperature required in all extremes of weather ; and the furnace, boiler, and flues, being so constructed as suggested, the fire might be made up and left without the least risk for six or eight hours on the severest nights. In the formation of the Egg Shaped Boiler my attention was particularly devoted to the construction of a furnace that would obviate the evils complained of in most hot water apparatuses. I mean the great consumption of fuel and the almost constant attention required, all of which arises from badly constructed fire places and boilers ; but, then on several other circumstances connected with hot water apparatuses which I think highly necessary to be attended to, particularly where the boilers are formed of series of pipes, varying from half

an inch to two inches in diameter, for in the first place on no account should dirty water be used, as it causes a settlement or accumulation of mud, which in time not only injures the boiler, but lessens its power, by not only preventing the fire from acting immediately on the water, but also because the accumulated deposit impedes the circulation of the fluid by diminishing the calibre of the water way, and ultimately forms a hard incrustation similar to what is seen on the bottom of steam boilers, and it frequently ends by burning a hole in the bottom or other parts of the boiler.

Some times in order to save a little trouble, where hard water is more conveniently obtained than soft or rain water, the boiler is filled with hard water which is as injurious as mud, for in the decomposition of the water, consequent on the process of boiling, earthy particles are deposited at the bottom, but if rain water is used, all this injury is prevented: as, I have on several occasions examined boilers that had been taken down after being in use for ten or more years, and where this important part had been properly attended to, there has scarcely been an appearance of incrustation. Moreover, in all plans of boilers, there should be a small cock so placed as to draw the whole of the water off occasionally, for the purpose of cleaning the boiler, &c., as it is well known that water when heated, not only evolves or gives out its component gases, but by mechanical deposition any matter, held in solution in the water, falls to the bottom, and this causes a sediment on the boiler, but by the use of rain or if convenient, filtered water, all this difficulty is overcome.

There is also another difficulty attending hot water, which if properly attended to in the first place, would not be such a perpetual source of inconvenience, namely, when water has to descend under door ways, &c., or to dip below the bottom of the boiler; I have frequently known in small plans of hot water which are admitted to be good in themselves, prove of no service in the cases described; nay, it has even been found necessary to remove them in consequence of the water not circulating under the paths, and other situations when it was necessary to descend and rise again, all this might have been avoided by giving the flow pipes a proper ascension when leaving the boiler, and by placing the reservoir, or cistern sufficiently high so as to counteract the power of the water in the return pipes: I was sent for last spring to remove an apparatus in a lady's greenhouse at Westerham, in

Kent, which could never be brought to act under the door, and succeeded very much to her satisfaction in causing the water to descend in both flow and return pipes, to more than two feet below the level of the bottom of the boiler, after which it had to rise again to above the level of the top of the boiler. The lady's name I have permission and authority to communicate to any person wishing to inspect the apparatus and being so perfectly satisfied with the working now, she has kindly consented to answer any enquiry. In concluding these few practical instructions or observations on the relative properties of common flues, steam and hot water; I shall merely state, that, during my practice I have always considered hot water a much more congenial heat to plants and all other organized bodies whether belonging to the vegetable or animal kingdom from their close analogy, and the circumstance of its containing less of the noxious gases which not only escape from the surface of the flue, but from all the fissures however the flues may be built, for it is impossible to confine this light and subtle fluid. Moreover, as the temperature of hot water pipes is more equal than a flue at both extremities, and rarely exceeds two-hundred degrees of heat, there is not that exhaustion of the aqueous or humid gases which is so essentially necessary to the very existence, much more to the health and fruitfulness of all plants, whether natives of torid or frigid climates, as nothing can tend more to the injury of plants and to the generating of insects than an acid atmosphere highly charged with unwholesome and extraneous gases, and as strong fires applied for heating hot houses with common flues, dries up all humidity and decomposes those nutritious gasses with which the atmosphere is charged, and which are so beneficial to the growth, the health, and the cleanliness of every description of plant, it is only first to infer that a flue which is continually destroying, by its intensity of dry heat, the very vitals of all plants, namely, the humidity of the air in which they are growing, besides evolving the disagreeable smell so common to flues when hot, which arises from the decomposition of the animal and vegetable particles continually floating in the air, it cannot be so congenial to the vegetable kingdom as a mild, gentle, and regular heat, such as is produced by hot water, which fluid is free from all noxious gases given out from the smoke, soot, lime, and bricks of a common hot house flue.

ARTICLE VI.

ON FLORISTS' CONVERSAZIONI.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, near MANCHESTER.

THE science of Floriculture has for some years been rapidly progressing through the instrumentality of Floral and Horticultural Exhibitions, but something more is requisite, and I would recommend the formation of district Floral Conversazioni. The artists have their *Conversazione*, and why not the florists? Much good would arise from these social-meetings, and that selfishness inherent in man would be in some measure banished from his bosom. The florists have long felt the want of meetings, where matters relating to Floriculture might be properly discussed, the bustle of an exhibition day affords but little time for such a purpose, as all are actively engaged on such an occasion. I have directed the attention of a few individuals to this subject, and a society of this description is now forming in this district. A number of respectable names ought to be obtained in the first instance as subscribers, that an opportunity might be afforded to reject all such as have not acted honorably in their transactions. This would have a great tendency to prevent those complaints which have been too often made by parties of having been duped and cheated with wrong plants and bulbs.

A library consisting of works upon Floriculture and Horticulture ought also to be attached, to afford the members the fullest information upon these subjects. Donations of books and money would be necessary to carry out this plan, and no doubt the wealthier florists would come forward handsomely to assist in providing them. The subscription must be in proportion to the number of subscribers, taking into account the general circumstances of the parties. This fund should be applied to the purchasing of all magazines and works, connected with the objects of the society. The members should be allowed to take home to read any volume or number of a periodical for a certain number of days. The meeting to take place once a month, when a given subject shall be discussed, and the President to name the subject proposed to be discussed the following monthly meeting. No doubt advantage would be taken of the season, to bring under notice those flowers, &c. then in perfection, and by this means much valuable information might be obtained. Having thus given

a brief outline, some of your readers, who, may wish to establish a society of this description, I doubt not will be enabled to fill it up.

ARTICLE VII.

ON RAISING RANUNCULUSSE FROM SEED,

BY H. C. S.

SHOULD you think the following worthy a place in your Florist's Magazine, I should feel obliged by your inserting it in an early number.

Ranunculus Seed is to be procured from semi-double flowers ; care should therefore be taken to save it from such as are possessed of good properties, viz, such as have full strong stems, a considerable number of large well-formed petals, and rich good colours, chiefly preferring the darker, but not to the exclusion of the lighter coloured when their properties answer the foregoing description. The seed should remain on the plant till it has lost its verdure, and becomes brown and dry, it may then be cut off, and be spread upon paper, in a dry room, exposed to the sun, that every degree of humidity may be exhaled from it, in which state it should be put into a bag, and preserved in a dry warm room till the time of sowing, otherwise it will be in danger of contracting a dampness, which will soon produce a mouldness, that will infallibly destroy it. January is the proper time to sow the seed, and in order to prepare it, it must be separated from the stalks to which it is connected, in the following manner, viz : in the first place it should be taken out of the bag and spread thin upon paper, tea tray, &c. and placed before a moderate fire, till it is just warm, and no more ; the seed will then easily scrape off, by means of a penknife, but great care must be taken to avoid scraping it off in lumps, or suffering any pieces of the stalk, dried petals of the flower, or other extraneous matter to be mixed with it, which would create a mouldness when sown, of very destructive consequence ; when the seed is scraped in a proper manner it will have the appearance of clean coarse bran, with a little brown or purple speck in the centre of each cuticle, which is the kernel.

When the seed is thus prepared, it should be sown on a shallow frame provided with glasses, similar to those made use of for

cucumbers and melons; the soil should have been previously taken out, three feet deep, and spread thin upon the ground till it has been perfectly frozen throughout, in order to destroy any vermin it may have contained. When the pit is filled up again with the frozen lumps of earth, it should remain till the whole mass has thawed, and subsided to its pristine bulk, or nearly so; its surface should then be made perfectly smooth and even, and the seed sown upon it with the utmost regularity, in such a quantity as nearly to cover it; the glasses should be placed over it immediately, and the frame kept closely covered with them, for two or three days, till the seed begins to swell and soften; a little light earth should then be sifted upon, through a fine sieve, but not sufficient to cover it, this should be repeated once or twice a week, till the greater part of the seed disappears: it is proper to remark that such seeds as happen to be covered deeper than the thickness of a half-crown piece, will never vegetate, and must, of course, inevitably perish. It is necessary that the seed be kept moderately moist by gentle watering with soft water that has been exposed to the sun, but too much moisture is nevertheless injurious.

About the time that the plants begin to appear, it is requisite to stir the surface of the earth with a pin, just sufficiently to admit air, and give liberty to the young plants to pass easily through; this operation should be very carefully performed to prevent breaking off the fibres, or raising and leaving any of the plants out of the earth, because one hour's sun upon such would certainly destroy them.

After the plants are all up, and their two interior leaves appear, more air must be given, by having hurdles or lattice work, substituted for the glasses; waterings must be regularly continued in the manner before described, when the long continuance of dry weather renders it necessary; but fine warm showers of rain are always preferable when they happen in due time.

This kind of management is to be continued till the roots are matured, and fit to take up, which is known by the foliage becoming brown, dry, and nearly consumed. The roots are to be dried and preserved in the usual way, and to be planted the same time as large ones in the autumn, the greater part, or such as have two or more claws, will blow in tolerable perfection the following summer.

J. G. S.

ARTICLE VII.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 96.)

THE furze bush also is one of the greatest enliveners of the shrubbery at this season, particularly when it is allowed to exhibit its golden blossoms at the foot of some dark foliaged evergreen. Among the trees of the back ground, the wych elm, the alder, the willow, and the ozier, flower in March, at the same period, the leafless branches of the almond are covered with blushing petals; whilst the sloe and plum are most conspicuously beautiful with snowy blossoms, which are enhanced by contrast, if made to rise from the midst of dwarf evergreens, and shaded by others of taller growth. In a later season, the fruit is no less acceptable, and scarcely less ornamental.

In the early months, also, the mezereon, the dwarf almond, and the pyrus japonica, give, life to the foreground, when planted in little groups of three or four of each together.

At this season of the year too, much of the beauty of the shrubbery depends on covering the banks, and feet of trees and shrubs with considerable patches of the earliest flowers.

In February the snowdrop has for its cotemporary the crocns, which is also very ornamental, when planted in such quantity as to cover a large space. When scattered singly, or arranged in formal bodies, its effect is entirely lost; and like a single candle, in a cathedral, it seems but to cast an additional gloom over the scene. The banks should, therefore, be made to glow with the flaming petals of the yellow crocus, whilst other spots should shine with the silvery tints of the purple variety. Clumps of the winter hellebore, or aconite, should also be formed on a large scale, as their yellow cups, set, as it were, in green saucers, have a fine effect in February. The anemone hepatica is also as beautiful as hardy; and as there are varieties with red, blue, and white flowers, it is a plant that should be cultivated to a greater extent than is usual, as an embellishment to this season. The wild wood anemone, whose white and yellow flowers so enliven the earth at the same time, may be planted under the trees; and the primrose, that so sweetly "peeps beneath the thorn," when sprinkled abundantly between the shrubs and trees, gives an additional plea-

sure to the eye. The story of Prosperine may be recalled to our minds, by the view of gay plantations of early daffodils, that shake their golden heads to the winds of February and March.

Let us not forget the common field daisy, large patches of which are very ornamental, when planted amongst shrubs; and the double crimson white, and variegated kinds, deserve a conspicuous situation for their beauty, as well as for their early flowering.

As the lawn forms a principal feature in every pleasure-ground, this should also have an undulating surface, where the extent of ground will admit of it: and it must be a small space indeed that will not allow of a bank being thrown up. The form of this part should neither be too regular, nor of a studied irregularity. It should appear in different places to retire into the plantation, so as to give the idea of greater extent, especially when viewed from the windows of the villa.

Where the coach road is carried through the lawn, (which however, if possible, should be avoided) it should be occasionally obscured by irregular clumps of shrubs, such as roses mixt with dwarf evergreens. The private walks must also be of breadth sufficient to admit three persons abreast, however small the grounds may be; for plants are sure to be injured where the walks are narrow. In extensive shrubberies, each walk should lead to some particular object: to the orchard, kitchen garden, botanical borders, greenhouse, dairy, ice-house, mushroom-hut, aviary, poultry yard, and stables. The intention of the plantation should seem to be, to conduct the walker in the most agreeable manner to each outlet and building of utility or pleasure.

Where a lawn is of sufficient extent for detached trees, the apple may be admitted with great effect, the blossom being amongst the most beautiful that open in spring. Such as produce a red fruit in autumn are more ornamental than most other trees.

To those who are so devoted to fashion, as not to venture to treat their lungs with air, unmixed with smoke, till the crowds that swarmed at court have fixed their departure for rural scenes and a pure atmosphere, like swallows and other birds of passage; to such, the gaiety of the autumnal shrubbery is of most importance. It remains to say, how the last expiring ray of beauty may be thrown over the pleasure-ground.

(To be continued.)

REVIEW.

A Practical Treatise on Warming Buildings by Hot Water : and an inquiry into the Laws of radiant and conducted Heat. To which are added, Remarks on Ventilation, and on the various methods of distributing artificial Heat, and their effect on animal and vegetable Physiology. By CHARLES HOOD, F. R. A. S. Illustrated by numerous Wood-cuts ; 8vo., p. p. 216. London: Whittaker & Co., Ave Maria Lane, 1837.

This excellent Publication contains a very judicious proposition of practical, and theoretical observations on the matters treated upon, and which are detailed in a very scientific and explicit manner. Every person who is at all interested in heating Dwellings, Hot-houses, Greenhouses, &c., ought to possess the Book, which cannot fail to prove extremely useful. We very strongly recommend the Work to our readers. The author observes in the preface that

“Frequent applications having been made to me, by persons who were aware that the subject had engaged my attention, to recommend to them a practical treatise on its principles and application, the utility of such a work in forwarding the progress of the discovery, became obvious. And finding that nothing relating to the invention had hitherto been published, except a few scattered and unimportant notices, it appeared probable that the materials I possessed might form a treatise which would be useful, not only in showing the practical application of the invention, but also in explaining the scientific principles upon which the various effects depend. The following pages are therefore offered, in the hope of supplying the desideratum.

“The different parts of the subject have been arranged, as far as possible, under distinct heads. The primary object has been to explain the principles, in a manner perfectly clear and intelligible to such as are unacquainted with those branches of physical science on which the philosophy of the invention is based: and, while endeavouring to remove the erroneous notion, which is entertained by some persons, that a certain degree of danger is inseparable from the plan, to show that danger can occur only through a misapplication of the principles.

“In order to pursue the inquiry in a popular manner, all abstruse calculations and scientific technicalities have been, as much as possible, avoided; and the most simple definitions the subject would admit of, have been adopted, as far as is consistent with perspicuity.

“The Rules, Calculations, and Tables, which are given in the body of the work, have, nearly all, been constructed expressly with reference to the present inquiry; and the tables given at the end of the volume are compiled from the best authorities: the whole comprising, it is hoped, all the information which the subject requires.

The Contents are

CHAPTER I.—On the cause of the circulation of the water, and its consequences.—Chapter II. On the application of the principles.—Chapter III. On the proportionate sizes of various parts of the apparatus.—Chapter IV. On permanence of temperature, depending on the form and size of the boiler and pipes.—Chapter V. On the size and construction of furnaces.—Chapter VI. On the laws of heat.—Chapter VII. Experiments on cooling.—Chapter

Vol. vi. No. 63

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VIII. On the application of the laws of heat, to determine the proper size of an apparatus for heating any description of building.—Chapter IX. On peculiar modifications of the hot-water apparatus.—Chapter X. General application and summary.—Chapter XI. On ventilation.—Chapter XII. On the various methods used for distributing artificial heat.—Tables, &c.

To show the nature of the work we extract the following.

"In making an estimate of the quantity of glass contained in any particular building, the extent of surface of the wood work must be carefully excluded from the calculation. This is particularly necessary in buildings used for horticultural purposes, where from the smallness of the panes, the wood-work occupies a considerable space. The readiest way of calculating, and sufficiently accurate for ordinary purposes, is to take the square surface of the sashes, and then deduct one-eighth of the amount for the wood-work. In the generality of horticultural buildings, the wood-work fully amounts to this quantity: but in some expensively finished conservatories, &c., it is considerably less, and therefore the allowance must be made accordingly. When the frames and sashes are made of metal, the radiation of heat will be quite as much from the frame as from the glass; therefore, in such cases, no deduction must be made.

"Some loss of heat will likewise arise from imperfect fitting of doors and windows. In these cases the circumstances vary very considerably; but in the majority of instances, no allowance is necessary for these sources of loss of heat, the external temperature of the air having been reckoned sufficiently low to supersede the necessity of any farther deduction.

"From the preceding calculations, the following corollary may be drawn:—the quantity of air to be warmed per minute, in habitable rooms and public buildings, must be $3\frac{1}{2}$ cubic feet for each person the room contains, and $1\frac{1}{2}$ cubic feet for each square foot of glass; and for conservatories, forcing houses, and other buildings of this description, the quantity of air to be warmed per minute, must be $1\frac{1}{2}$ cubic feet for each square foot of glass which the building contains. When the quantity of air required to be heated, has been thus ascertained, the length of pipe which will be necessary, may be found by the following

"RULE:—Multiply 125 by the difference between the temperature at which the room is purposed to be kept, when at its maximum, and the temperature of the external air; and divide this product by the difference between the temperature of the pipes, and the proposed temperature of the room: then, the quotient thus obtained, when multiplied by the number of cubic feet of air to be warmed per minute, and this product divided by 222, will give the number of feet in length, of pipe 4 inches diameter, which will produce the desired effect."

(To be Continued.)

The Fruit, Flower, and Kitchen Garden, being the article, "HORTICULTURE," of the seventh edition of the Encyclopædia Britannica. By PATRICK NEILL, L. L. D., F. R. S. E. Secretary to the Caledonian Horticultural Society. Edinburgh: Adam & Charles Black, North Bridge, Booksellers to Her Majesty for Scotland; 12mo. p. p. 336.

This work reached us so late in the month, that we can only notice its publication, for the present, we will remark further in our next. We would just observe, however, that the work issuing from so eminent an Horticulturist as the author, is a sufficient recommendation of it to every person fond of gardening.

PART III.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. AMPHICOME ARGUTA,
- Finely-cut leaved.*
- [Bot. Reg. 19,

BIGNONIACEÆ, DIDYMANIA ANGIOSPERMIA.

This very handsome flowering herbaceous perennial plant, was discovered on the Himalaya Mountains, at an elevation of six or eight thousand feet. Seeds of it were sent to the London Horticultural Society, in whose garden a plant bloomed last August. It grows about a foot high, of a neat appearance, producing its beautiful blossoms abundantly, in a terminal raceme; each flower is near two inches long, funnel-shaped, the mouth divided into five sections, and of pretty rose colour, with a few streaks of white, and the bottom part of the tube is yellow. It blooms from June to the end of summer. It is a very desirable plant for the flower garden; it is found to require a dry situation, or will be very liable to perish in winter, it would be best to protect it in winter by a hand glass, or something of that kind. The plant can be propagated either by seeds or cuttings. *Amphiscome*, from *amphi*, around; and *kome*, hair; alluding to the structure of the seeds.

2. CYMBIDIUM TRISTE,
- Lurid flowered.*
- [Bot. Mag. 3643.

ORCHIDACEÆ. GYNANDRIA MONANDRIA. SYNONYM, EPIDENDRUM TRISTE.

A native of Nepal, Ceylon, and Japan. It has bloomed in the collection of Orchideæ belonging to John Horsfield, Esq., Everton, near Liverpool. The flowers are produced on a short sessile raceme. The stem rising about eight or ten inches; sepals of a purplish-yellow, lip large, and of a rich deep purple, column mottled with rosy-purple. Each blossom is about an inch and a half across.

3. LOASA LATERITA,
- Red flowered.*

LOASACEÆ, POLYADELPHIA POLYANDRIA.

Mr. Tweedie sent seeds of this pretty flowering species from Tucuman. It is a fine climbing kind, producing numerous flowers of an orange red colour. It blooms freely in the open air during summer, and when grown in a greenhouse or conservatory nearly all the year. It is easily raised by seeds or cuttings, and delights in a sandy loam. It is an ornamental plant for a Verandah or trellis in the flower garden.

4. MAMMILLARIA FLORIBUNDA,
- Copious flowering.*
- [Bot. Mag. 3647.

CACTEÆ, ICOSANDRIA MONOGYNIA.

This pretty flowering species was imported from Chili, by Mr. Hitchen, and is now in the rich collection of Messrs. Mackie, Norwich. The flowers are produced at the crown of the plant, most abundantly. They are of a fine rosy pink colour.

5. *MUCUNA PRURIENS*, *West Indian Cow-itch Plant*. (Bot Reg. 18.

FABACEÆ, DIADELPHIA DECANDRIA.

In the West Indies the plant grows in the waste lands, fences, river courses, &c. Its long twining stems rapidly takes hold of every thing within its reach, producing its numerous long racemes of fine purple flowers. In the plant stove of F. Perkins, Esq., Shipstead Place, it bloomed in 1836; each raceme of flowers being near a foot long. The hairs upon the plant are so pungent as to pierce the skin, and cause a violent pain, and intolerable itching. *Mucuna*, is its Brazilian name.

6. *PASSIFLORA ONYCHINA*, *Lieut. Sullivan's Passion Flower*.

PASSIFLORACEÆ. MONADELPHIA PENTANDRIA.

A native of Rio de Janeiro, and introduced into this country by B. J. Sullivan, Esq., and was first grown in this country in the fine collection of Sir Charles Lemon, Bart. M. P., Carclen, Cornwall. It is a very beautiful hot house species, flowering profusely; each flower is about two inches and a half across, of a fine light blue, tinged with rose, and the centre of a carmine red. It deserves a place in every collection.

7. *PENTSTEMON DIFFUSUS*, *Spreading pentstemon*.

SCROPHULARINÆ, DEDYNAMIA ANGIOSPERMIA.

A hardy herbaceous perennial species, growing two or three feet high, and spreading proportionately. The plant was discovered by the late Mr. Douglas, near the mouth of the Columbia River. The flowers are produced in large panicles, of a bright purple colour. Each flower is about an inch long. It is a very pretty species.

NEW OR RARE PLANTS NOTICED

AT MESSRS. LODDIGES'S, HACKNEY NURSERY.

ACACIA VIRGATA. This neat and pretty flowering species we have seen in several collections; very fine plants at Messrs. Loddiges's, Hackney Nursery. The plant is of a much neater habit than *Acacia armata*. The flowers are produced in profusion, of a deep yellow, and very fragrant. It merits a situation in every greenhouse or conservatory. It is sold very cheap.

ACACIA HYBRIDA. This kind appears to be an hybrid, between *A. armata* and *A. angustifolia*. It is a very neat, erect growing kind, flowering freely, the blossoms are of a beautiful yellow; Messrs. Loddiges's have a good stock of plants, at a low price.

EPACRIS. Of this most beautiful flowering genus, we saw the following handsome kinds: viz. *E. campanulata alba*, *E. campanulata rubra*, *E. nivalis*, each of which are very handsome, blooming so profusely, and at the early part of the season, they are most desirable ornaments for the greenhouse or conservatory. Plants may be had cheap.

PACHRYPODIUM TUBEROSUM. Messrs. Loddiges's have this beautiful blooming plant. It has the appearance of an *Euphorbia*. The flowers however differ, they much resemble the *Gloxinias*, but are a trifle less. Each flower is somewhat less than *G. superba*, of a beautiful flesh colour outside, but of a dark rose within. It would flourish well in a warmish greenhouse.

EUPHORBIA SPLENDENS, var **NOVÆ**. The original beautiful flowering species was procured by the Duke of Devonshire. The plant now under consideration appears to be an hybrid. The blossoms are of a pretty rosy crimson, more than half an inch across, and of a lighter colour than the flowers of the original species.

EUPHORBIA JACQUINIFLORA. A very beautiful scarlet flowering species, very ornamental for the plant stove. Both the above are plentiful at Messrs. Loddiges's.

SCOTTIA DENTATA. A neat flowering greenhouse shrub. The flowers are of the pea form, of buff colour, edged with carmine, produced in profusion. The plant is a very neat growing one, having pretty cordate leaves.

BORONIA ALATA. A very handsome growing plant, with striking foliage. The flowers are near half an inch across, of a pale rose colour. It is an ornamental plant for the greenhouse.

HOVEA LONGIFOLIA. A very pretty greenhouse plant, flowering very freely. The blossoms are of a rosy purple colour.

HOVEA NOVÆ SPEC. A new species with flesh coloured flowers.

HOVEA ELLIPTICA. This is a very pretty flowering species. The blossoms are very striking. The wings are of a pale blue, whilst the keel is of a dark violet, the contrast being beautiful.

HOVEA PURPUREA. In growth it much resembles the above species, the flowers are of a purple colour.

LILIUM SPECIOSUM, var. **LANCIFOLIUM**. A plant of this fine flowering kind is throwing up a flowering stem. There are two other new kinds which appear likely to bloom during summer, viz. **L. ROSEUM**, and **L. LANCIFOLIUM PUNCTATUM**. These new Lilies are highly ornamental plants for the greenhouse.

DENDROBIUM NOBILE. This splendid flowering stove Orchideous plant has been profusely in bloom, the blossoms far exceed in beauty any other species. In fact, no other stove orchideæ that we have seen is equal to it in beauty. Each flower is about three inches across. The white being pure, and some portions of the flower of a rosy carmine. The inner part of the labellum is of a deep violet crimson, producing a most striking effect. The plant deserves a place in every collection.

ACACIA VIRGATA. A very neat growing greenhouse species, producing a profusion of deep yellow blossoms, which are very fragrant. It deserves a place in every collection; blooming so early and freely, in addition to being sweet, alike recommend it.

DOASMA CAPITATA. A beautiful greenhouse plant, forming a neat bush, and blooming most profusely. The flowers are of a bluish purple. It is as hardy as a Myrtle.

CAMELLIAS. The show was most brilliant, and some of the kinds are grown to large bushes, ten or twelve feet high, and literally loaded with flowers. To walk amongst them is like going through a forest of Camellias. It would amply repay a visit to view them. We shall remark on various kinds in our next.

AT Mr. LOWES, Clapton Nursery.—**RUELLIA AZUREA**. A new and handsome species, with flowers of a fine blue.

GARDOQUIA MULTIFLORA. A new and handsome species, the flowers are of a fine rosy scarlet, and produced very abundantly. It will be very ornamental for the greenhouse.

GREVILLIA ROBUSTA. A greenhouse plant with very beautiful foliage. It was not in bloom.

PART II.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON GLYCINE HARRISONIA.—M. E. L. will thank Mr. Harrison to inform her, through the Floricultural Cabinet, when, where, and at what price, plants of the *Glycine Harrisonia* may be procured; likewise how they could be forwarded, and if any particular care is requisite in their management.

[The plant can be supplied by us from Downham Nursery, 7s. 6d. each. It is of the easiest culture, vigorous in growth, and a profuse bloomer.

—CONDUCTOR.]

ON A COMPOST FOR THE AURICULA.—Having long admired the candour and intelligence of your "Cabinet," and the facility it gives to inquiry, and clearing up of doubts on floricultural subjects; I take the liberty of availing myself of this latter characteristic in the present instance.

In a compost I am forming for Auriculas, I have saturated layer after layer with the urine of horses, and then keeping it under cover, the fluid parts evaporate, leaving urea, phosphure of lime, and other salts contained in the urine, intermixed with the compost. Do you not think this will greatly increase the fertilizing properties of the soil? Is not inspissated urine or urine evaporated until it becomes glutinous, a remarkably active manure? The pondrette of the French contains a considerable ratio of this; do you think it likely to injure my plants, after it has been thoroughly incorporated with the soil? By inserting these queries as early as possible, and some correspondent favouring me with an answer will greatly oblige a

CONSTANT READER.

ANSWERS.

ON THE FUCHSIA.—Reply to an Amateur, resident at Camberwell.—I beg to state that I have cultivated that beautiful and graceful plant, the *Fuchsia*, mentioned in his query, for above three years, and have now a plant not more than two years old, 5 feet in height, and as many in circumference. My opinion is, that putting the plants in-doors of an evening, is the cause of the buds dropping off, as I always leave mine out night and day, as soon as the frosts are over; in the next place, it is probably for want of water, when coming into bloom, they should be plentifully supplied, at least twice in four and twenty hours: and a pan always kept under them. I have no doubt, if your correspondent will adopt this plan, he will find himself rewarded, by a splendid show of these delightful flowers.

Bayswater.

W. M.

ON THE WISTERIA SINENSIS.—In answer to the query of "A Subscriber, contained in the last number of the Floricultural Cabinet, I may, perhaps, be able to give him some little information on the flowering of the *Wisteria Sinensis*, which at first disappointed me as it appears to have done the Enquirer. When I obtained my plant six years ago, having seen it in bloom in the South of England, I imagined the shelter of the greenhouse might be necessary for its flowering and accordingly placed it there, where it soon covered the whole of the back with its luxuriant foliage, but never showed one flower. The following spring it was placed in a full South aspect against the garden wall in the open air, but still failed to flower; when by the advice of a person who had seen the plant elsewhere, I had it dressed

and cut in the same manner as a vine, leaving only one or two eyes of the new wood. The first season it flowered very sparingly, but last spring, at this time, it was covered with a profusion of blossoms, even before the leaves were fully expanded; and it flowered a second time in the autumn. The present unusually cold season appears to have retarded it, but it gives promise of many flowers. It is merely planted in common garden loam, and suffered to remain unprotected during the winter, but as soon as it shows signs of returning vegetation, a wollen net is placed over it every evening to guard it during the frequent night frosts, and is not removed until the sun has some power in the morning.

H. F.

FLORICULTURAL CALENDAR FOR MAY.

PLANT STOVE.—Very little fire-heat will now be required, only applying it in cold weather. The plants will progressively require an increase of air and water. If any want an increase of pot-room, it should be attended to as early as possible; otherwise, if not watered frequently, the foliage or flowers will be liable to suffer, turn brown, or fall off the plant. Keep the plants free from decayed leaves, moss, &c. Frequently stir the surface of the soil. When any casual irregularities in form occur, prune or tie the shoots as required. It is a good time for propagating by cuttings, suckers, seeds, &c. placing them in moist heat.

TENDER OR STOVE ANNUALS.—When it is desired to have some plants to bloom late in autumn, as Balsams, Cockscombs, Browallia, &c., seeds should now be sown, and the plants potted off into small sized pots, as soon as they are large enough, using a rich soil.

GREENHOUSE.—During the early part of May, a few frosty nights generally occur; in consequence of which, it is advisable not to take out the general stock of plants before the middle of the month, or even in cold situations, before the 25th. Whilst the plants, however, remain in the greenhouse, let them have all the air that can be given, during the day, and at nights if no appearance of frost. Particular attention will now be required to afford an ample supply of water to free-growing kinds of plants. Frequently syringe them over the tops at evening, just before sun set. If any of the plants be attacked with green fly, or any other similar insects, apply a sprinkling of tobacco water, diluted with water, by adding to one quart of the liquid five of water; in applying which to the plants, syringe them at the under as well as upper surface of the leaves: a repetition will rarely be required. This mode of destroying the insects is far preferable to fumigation, no injury being sustained by it, even if applied in a pure state. The liquid can be obtained of tobaccoists at 10d. or 1s. per gallon. Inarching Orange or Lemon trees may still be performed. It is a good time for increasing plants by cuttings, striking in moist heat. Greenhouse annuals—as *Salpiglossis*, *Globe Amaranthus*, *Balsams*, &c.—should be encouraged by a little warmth, and shifted into larger pots, early in the month; so that the plants may make a show, to succeed the removal of the general collection of greenhouse plants. Cuttings or suckers of *Chrysanthemums* should now be taken off, if not done before. *Triverania coccinea* plants should be potted singly into a light rich soil and be forwarded in the stove, and repotted as they advance in growth, not too much at a time, but as root room appears necessary. *Lobelias* for the greenhouse should be similarly treated, as to potting, &c.

FLOWER GARDEN.—Continue to protect beds of *Hyacinths*, *Tulips*, &c. *Carnations* in pots should be encouraged by manure water, &c., in order to grow them vigorously: care in striking them will be required. By the middle of the month, half-hardy annuals—as *China Asters*, *Marigolds*, &c.—may be planted out in the open borders. Some of the best kinds may be potted, as done to the more tender sorts. Many kinds of greenhouse plants

—as *Petunias*, *Salpiglossias*, *Salvias*, *Fuchsias*, *Heliotropes*, &c.—should now be planted out in the open border. *Dahlias*, that have been forwarded in pots, frames, &c., may be planted out towards the end of the month. Seedlings may be pricked out, in a warm situation, having a deep, fresh, rich soil. When *Stocks*, *Mignonette*, *China Asters*, &c. are wished to bloom late in the year, seeds may now be sown, either under a frame or on a warm border. Slips of *Double Wallflowers* should now be put in, under a hand-glass. Seeds of biennials—as *Sweet Williams*, *Scabious*, *Campions*, &c.—should now be sown. *Tuberoses*, for late flowering, should now be planted, either in pots or warm borders. Offsets of *Campanula pyramidalis*, should be planted in rich soil, and placed in the greenhouse. Repotting must be continued till they cease to grow, by this means the plants will reach eight feet high, and be very branching.

REFERENCE TO PLATE.

CAMELLIA JAPONICA, var. *MARCHIONESS OF EXETER*. This very superior variety was raised by James Priaula, Esq., Monteville House, Guernsey. The seed was procured from the variety *Middlemenists*. The plant combines the vigour of that variety, with the very valuable property of a most profuse bloomer. Mr. Priaula, favoured us with a bloom, and having since looked through all the collections in and about London, we have not seen one equal to it. Its beautiful colour, extraordinary size, and its free blooming property, alike unite to render it unrivalled in its class.

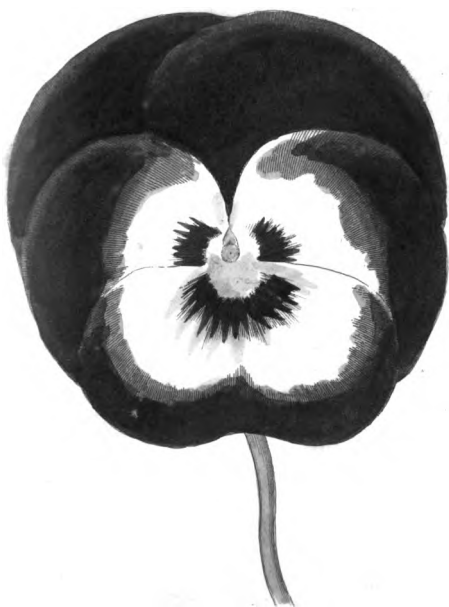
TROPEOLUM JARRATTI. The flowers of this handsome species, have a resemblance to *T. tricolorum*, but on examination it will soon be perceived that there is a very great distinction. The flowers of the present species are nearly twice the size, of a much more brilliant colour, and having a small portion of yellow on the outside, the two upper petals are finely streaked with brown. The plant has been introduced into this country by Messrs. Youell, Nurserymen, Yarmouth, having had it sent them from Santiago. The plant has been found to flourish in a very cool Greenhouse, and there flowering most profusely. It is very probable that it will flourish and bloom abundantly during summer, in the open border, as early in spring as the weather will permit. It would certainly be a fine acquisition to every greenhouse, conservatory or flower garden, as it grows very vigorously. Messrs. Youell, we are informed, imported a considerable number of *Tropeolum* bulbs, but only two kinds have yet bloomed, viz., the present species, and *T. brachyceras*, it is expected other beautiful kinds will be found amongst the lot. The specific title was given by Messrs. Youell, in compliment to a distinguished Horticulturist, John Jarrat Esq., Camerton House, near Bath.

TROPEOLUM TUBEROSUM. This very showy species was sent to the Glasgow Botanic Garden, by the late Mr. Drummond, from the Texas. We saw fine plants of it in bloom, grown in the open border during last summer, and autumn, at the Epsom Nursery. We were informed that it does not flourish if kept in a pot, but when pushed on a little in spring, as done with *Dahlias*, and like them be planted out in the open air, the plant grows so vigorously, that with a number of branches stuck in the ground so as to form a bush, we saw plants overspreading the branches, so as to completely hide them, being four or five feet high, and more than that in diameter. The dense mass of foliage, forming a handsome bush. The flowers are produced upon long footstalks, which protrude several inches above the foliage, exhibiting them to view in a striking manner.

The plant is of easy culture, being increased very easily by cuttings, or tubers which are produced freely. The tubers are fit to eat, having the flavour of a superior potatoe, but are watery.

They require to be treated as the *Dahlia*, by taking up the tubers at the end of summer, and preserving them during winter; also in the spring and summer treatment.

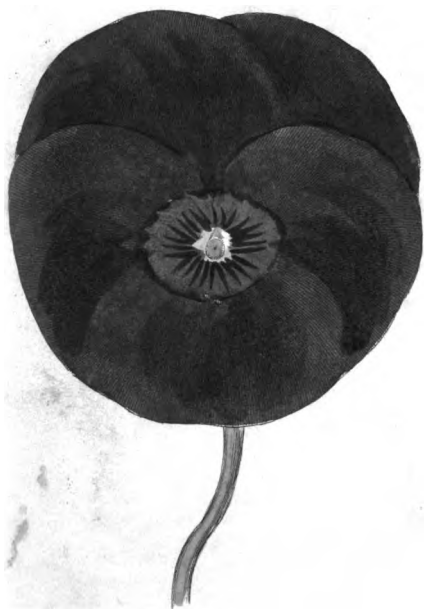
June 1920



Pom



Victoria



Duke of Marlborough



Nephus ultra

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THE
FLORICULTURAL CABINET,

JUNE, 1st, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

**MODE OF OBTAINING DWARF COCKSCOMBS FROM TALL
GROWING VARIETIES.**

BY WILLIAM WHEATLEY, FLOWER GARDENER TO JOHN WILLIAM SPICER, ESQ.
ESHER PLACE, SURREY.

EARLY in the month of March the seeds were sown, and placed in a warm frame ; as soon as the plants began to show flower, the best were selected of various shades of colour, and pricked out into large pots, from whom the best again were made choice of, and potted off for flowering, the remainder were left in the pots, until they attained the height of about twelve inches. These by way of experiment, were cut off about two inches under the crests, which were at that time about four inches in length, and potted off into 60's. In the course of a fortnight they were well rooted, and in about a fortnight after they were shifted into 48's; three weeks after this it became necessary to give them another shifting, when they were finally put into 32's. During the above process the pots were plunged in leaf mould up to the rim in a warm frame, where they remained till the end of July. The average length of the crests measured twenty-four inches, and five inches across over the disk, and the height of the plants when fully grown was about five inches above the

VOL. VI. No. 64.

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pot. The compost they were grown in consisted of one half of good loam and equal parts of leaf mould and rotten dung well mixed up together.

To the experienced Floriculturist the above practice may not be new, but to many readers of the Cabinet, it may claim an interest, and as such I send it for insertion in your widely extended and useful publication.

Esher Place, May, 1838.

W. WHEATLEY.

ARTICLE II.

ON LAYING CARNATIONS.

BY POMONA.

As THE season for laying Carnations is fast approaching, if you think it worth your while to publish in the Cabinet the plan I adopt for that purpose, it is at your service. Laying in many cases are indispensable for the continuation of the sorts, for if a plant sends up but only one stem without any side shoot for laying and be allowed to blow, it will likely die. If this happen to valuable kinds, the flower bud should be nipt off, so as to cause the plant to branch.

It is said by an eminent florist that common gardeners are great bunglers in laying, and that there is not one in ten whose assistance he would accept in a case of emergency, that he would rather trust to an amateur, a cobbler, a weaver, or a barber, who had any sort of practice with their own flowers; but how far this statement is correct I will leave it to others to judge for themselves.

The best time to lay Carnations, is when the plants are in full bloom, which generally happens about the middle or towards the end of July or the beginning of August, according as the season is more or less forward; whenever this mode was adopted I have invariably found that they were more certain of striking than at any other season of the year.

Persons who are particularly desirous of preserving the blooms, in the greatest perfection, defer laying till the flowers decline, the blooms being considerably impaired by the operation, more especially if the weather is dry and at an early period of blooming. The advantages which is derived from early laying is to

obtain plants that are strong and healthy before the cold weather commences; I consider the best time to be from the 20th of July to the 20th of August, when they will have time enough to root strongly before the winter begins.

The pegs which I select for laying is fern, (but others use wood or bone) each five or six inches long, with a short hook at the top. Fern pegs, which in most places are easily procured, are, in my opinion to be preferred, because they are naturally formed for the purpose; they retain a sufficient degree of strength to hold the layers securely down till they have formed root, and will decay when no longer needful.

The day before I begin the operation of laying my plants, I water them freely, taking great care to pick off any part that is decayed, or likely to obstruct their rooting; and when they produce too many side shoots, it will be better to take only two or three layers, if the sort is of value, reserving the rest for pipings, because many layers draw too much nourishment from the root of the plant. Supposing the layer selected to have four or five joints, the lower leaves must all be cut off, or stripped close to the stem, till within two or three joints of the end or extremity of the layer.

The practice which I pursue is to cut off all the leaves with a knife or a pair of scissors, so as to leave them only an inch, or an inch and a half in length, from the joint whence they proceed according to the strength and substance of the layer; but it is questioned by some whether it would not tend to strengthen the new plant about to be formed, were the ends of the leaves left entire.

All the layers on one plant must be thus dressed or prepared before proceeding farther; and when the layers are ready, the bits of leaves must be cleared away from the surface of the soil, which ought to be stirred about an inch in depth, and fresh mould, rich and light, but not too fine in the grain added, to the depth of an inch or two. I find that the old Carnation compost used last year answers very well for this purpose, and ought to be kept for the occasion. I next take a very sharp, smooth-edged pen-knife, with a small thin blade, holding the layer between the thumb and fingers of the left hand a little bent upwards, and introduce the knife on that side of the layer next the ground in a sloping direction upwards, commencing about a quarter of an inch below the second or third joint from the extremity, and con-

tinuing to cut through the middle of that joint, and one half or three quarters of an inch above it. The small portion left under and connected with the joint is to be cut off horizontally, quite close to the bottom of the joint, but not into it, because it is from the outer circle of the bottom of the joint that the fibres proceed, and consequently this part ought to be protected. It is also requisite to cut it off close to the joint, because if suffered to remain, it would decay, and perhaps infect with putridity the joint itself, and kill the plant.

The slip or tongue thus recommended to be made, is for the purpose of interrupting the pulp from flowing downwards, and to enable it to form root fibres, while the sap in the more central parts flowing upwards would not be interrupted, and the layered shoot still continue to grow as if nothing of the kind had happened. If the incision is made with a knife, the layer should be pressed into the soil firmly, and great care must be taken not to break it off or crack it at the joints, for this would interrupt the due supply of sap from the mother plant, and it would also render it liable to canker, and if that should take place the plant must inevitably perish.

A peg must be forced into the ground close behind the joint where the incision was made in the layer, and not more than half an inch below the surface of the soil, for I have always found that the fibres are soonest formed, when the joint from which they proceed, is barely covered with earth. When buried too deep they will be out of the reach of the sun's heat, and of course less liable to root, and in many cases decay all together. The remaining part of the stalk of the layer should lie as much as possible upon or above the surface of the soil, but should not on any account be covered deep with earth, for the heat of the sun, and air, being excluded, would inevitably cause it to decay before the layer could be furnished with sufficient nourishment to cause the process of rooting.

It will be necessary to raise the extreme point of the layer to as upright a position as can conveniently be effected, but it is necessary at first that it should have an exactly erect position, for it will naturally soon acquire this in its progress of growth. It should not be so horizontal as not to allow the cut part to open sufficiently for the fibres to issue out with regularity on every side. The layers when pressed down should be in a dry state, for they are so brittle when full of sap that they are liable

to break off. When, therefore, the layers are dressed and ready to be pegged down, it is requisite the plant should be placed in the sun for a short time, say half an hour, in order that the layers may become flaccid and pliable, I have found this a very beneficial experiment.

I have always found it the best mode of proceeding to give the plants a good watering after the process of laying, and also to shade them from the influence of the mid-day sun, till the layers has taken hold of the soil by rooting themselves firmly. They will be rooted generally in about three or four weeks, and may be removed in two months.

When the roots of the layers have struck firmly in the ground they may then be cut off from the mother plants, with nearly an inch of the stalk below the incision attached to them, and with the root fibres as entire as possible. The sticky parts near the bottom and the top leaves must be trimmed off, and the young plants will then be fit for planting out either in beds or in pots, just as the inclination of the person laying may think fit. If planted in beds, they may be placed six or eight inches distant from each other with a dibber, and have a good watering every second day till they take fresh root, which will not exceed two weeks, and I consider the best time for separating the layers to be about the middle of March.

When the roots of the plants appear to be firmly fixed in the soil they should be removed with balls of earth about their roots, and potted in large or small pots, according to the fancy of the grower. If on removal from the mother plants they are to be potted, this may be done in pots No. 48, or larger, according to the number of plants to be placed in each pot; the compost should be good loam and leaf mould in equal proportions, which I have generally found to answer the purpose, and to produce strong plants, and fine flowers. After planting, I place the pots upon boards, slates, or tiles, that the intrusion of worms may be prevented, and about the middle of October I convey them to a place of safety to protect them from the winter frosts.

Unless very strong and sound, the plants from which the layers are taken, seldom survive, but it may sometimes happen that the young upper shoots be left, as is often the case when they are too short to be conveniently laid. These short shoots will of course continue the growth of the plant by promoting the absorption of the sap from the soil. The old plants

which are likely to survive after the layers are taken off, should be placed in the warmest situation in the garden, and be defended from severe frosts and heavy rains during winter, by mats and hoops. When the spring approaches the plants will require to be fresh potted like other plants; by this treatment it is likely they will become strong and healthy and grow flowers equal, if not superior to those they formerly produced.

ARTICLE. III.

ON A DESCRIPTION OF THE ALOE.

BY POMONA.

THE Aloe is a genus of succulent plants belonging to the natural order *Asphodeleæ*, and comprehends a considerable number of species which differ from each other exceedingly in the size, form, and surface of their leaves, in stature, and in the colour, size, and structure of their flowers. The greater part of them are mere objects of curiosity, are only seen in collections of succulent plants, and in this country they are generally placed upon lawns or before the edifices of gentlemen, where they have a very pleasing effect; but there are among them a species of very great value on account of its yielding the well-known medicine of the same name.

From what particular species the resinous substance called Aloes is procured, and whether the different samples known under the name of Hepatic, Soccotrine, and Horse Aloes are yielded by different species, or are only different qualities of the same species, are points not clearly settled.

All that appears certain is, that plants nearly related to Aloe *perfoliata* of Linneus, which some consider as distinct species while others pronounce them mere varieties of the same, are what the drug is prepared from. In all probability, all the species of the genus, having an aborescent stem and thick succulent leaves, will yield the substance equally well.

That which has the reputation of producing the best aloes is *A. Socotrina*; a plant having, when old, a round stem, three or four feet high; leaves of a sword form a foot and half to two feet long, sharp edged, sawed, hard and pungent at the apex, often collected in clusters at the top of the stem, and red flowers

tipped with green, borne in clusters on tall stalks, which rise erect from among the leaves.

This plant is a native of the Cape of Good Hope, and the island of Soccotora, but is now commonly cultivated in the West Indies. The processes of preparing the drug are various. Sometimes the leaves are cut off at the base and placed in iron vessels to drain, until they have discharged all their juice, which is then inspissated; in other places the leaves are cut into slices and boiled for ten minutes, after which the water in which they had previously been boiled had evaporated, the resinous substance is left behind. Pressure is occasionally resorted to for the purpose of procuring the greatest quantity of juice.

Soccotrine aloes seem to be the purest kind obtained by draining only, hepatic or Barbadoes aloes are less pure, and may be obtained by boiling or slight pressure; while horse aloes are undoubtedly a coarse preparation of the dregs of the last-mentioned.

No plants can be more easy to cultivate artificially than the Aloe tribe. They are incapable of parting rapidly with water, and therefore they require to be planted in a soil that is very slightly retentive of moisture, so that they may not be gorged with it by their roots; for this reason they are potted in a compost consisting of little more than lime rubbish, mixed with a small quantity of ordinary soil, and carefully drained. They require a greenhouse which is capable of being maintained at a temperature not less than forty degrees in the depth of winter, at which time they ought to have no water whatever; in the summer they want no fire heat, but may be watered regularly, the supply being always according to their rate of growth, and likewise to the temperature of the air; that is to say, when in full growth and a high temperature, they may have abundance of water, but when growing slowly and in a low temperature, they should have but very little.

POMONA.

ARTICLE IV.

ON THE COMPOSTS FOR THE AURICULA.

BY ETHNIC.

THIS plant is grown in most of the poor artisan's gardens in the greatest perfection, for it is a plant that requires more care than all the florist flowers; in Manchester, the method of growing the plant, is this, the frame or pit is made of turf, built three feet high at the back, and two feet in the front, facing the south-east, with a wooden shutter or door to keep off the wet and frost, and to be taken off in mild weather.

In planting the Auricula for bloom, care should be taken to select strong young plants with strong hearts and sound, free from all decay, looking white and healthy round the shank or neck, the plants must be planted in rich light soil; the soil used in Lancashire is three parts rotten sheep dung, with one part light fresh mould mixed together and past through a seive or riddle; in Yorkshire the compost parts are one barrowful of dead leaves, one barrowful of cow dung two years old, one barrowful of decayed vegetable mould, and one barrowful of river sand mixed well together; in Lancaster it is similar to the above, in Suffolk dead fish is used instead of rotten cow dung, which they say grows them much finer than either horse, sheep, or cow dung. I have seen near Bristol some sorts that have been very fine and good flowers, which I have condemned altogether as not being fit for show, and if I had had them at several exhibitions, they would have stood the first; no doubt there is so much for situation and soil with this flower, that it would be difficult to describe which is the best, for it will grow very fine in either of those I have mentioned above, though it is so variously treated with growers who have has many different means of mixing the compost with as various soils, as there is varieties of plants themselves.

But I believe the best way to have the frames, is to build them with a stage as figured in a former number of your Cabinet; if the frame was made so as to take away the back and front, and leave the glass on in wet weather, it would keep them dry and give them air at the same time, I am likewise sure the plants would be more healthy and not so liable to

damp off, as is in general the case with plants grown in pits or frames, as I have elsewhere described, they will retain their health only for a short time, for I know of no person growing them in pits but the stock has dropt off by a disease of rotting in the neck of the plants, when this begins there is no end till the whole stock has suffered; in this case examine the plants and you will find them to look of a purplish hue round the neck, they must then be carefully removed or the disease will infect the whole stock; my own frame is built of brick two feet high at the back and one foot at the front, with stakes at the corners three feet long at the back and two feet in the front for the doors, there is then a board one foot in breadth back and front on hinges, which is drawn up in rainy weather for the admission of air; this is the best plan that I know of for the culture of the Auricula, the number of varieties in cultivation have been given in a former number of the *Floricultural Cabinet*.

ARTICLE V.

ON THE CULTURE OF THE LOBELIA CARDINALIS.

BY EMILY ARMSTRONGE.

I WOULD not have offered these remarks on the above splendid flower after the able and pleasing statement made by An Ardent Amateur in a former number; but have experienced on trial that they can be grown with less care and trouble than described by him. In the month of October I removed the plants from the open border into pots eleven and twelve inches in diameter; the flower pots contained a mixture of yellow clay, light mellow loam and pit sand, previously well mixed and sifted; having no green-house, they were placed in a room having a south westerly aspect, there being no fire allowed while the plants remained in it. In the first week of the month of March I divided the offsets from the parent plant, not having done so the previous October; I am convinced that spring is the best season for such separation; all the offsets and parent plants were separately planted into pots of a smaller diameter, containing the same kind of soil. The last week of the month of March I turned each ball containing one plant (taking particular care that no portion of the soil should be separated from it,) into a border well sheltered from the

north-east and westerly winds, yet sufficiently airy and open. The south-eastern border was previously prepared thus, three inches of well rotted dung first laid in, four inches of well sifted light mellow loam, leaf mould, pit sand, and yellow clay, well incorporated together six months previous; the plants were then inserted into this, and never drooped whenever there was an appearance of frost at night, a flower pot was placed over each plant, and removed the succeeding morning. The growth of all weeds were checked around the plants by repeated turnings of the upper surface of the soil, which also refreshed the plants, during the dry season they should be watered abundantly two or three times a week with and without the rose on the watering pot.

By the above treatment I have had twenty-six plants from three parent roots in one year and all are of great magnitude promising an abundant bloom.

EMILY ARMSTRONGE.

July 25th 1837,

ARTICLE VI.

ON THE CULTURE OF CUTTINGS OR SLIPS OF DAHLIAS.

BY AN AMATEUR.

THE Dahlia has of late years so much engrossed the attention of Florists, that perhaps the following observations on the culture of slips or cuttings of that majestic and beautiful autumnal flower may not be uninteresting to your readers; the slips ought to be short branches taken off either by the hand or the knife from the main stem, or what is preferable, originating near the tuber itself; it being important to have as much as possible of the woody fibres at the joint, as the soft juicy part is apt to decay rather than produce roots. In the spring, indeed, when the eyes, have shot up two or three inches, the shoots may be broken or split off by pushing them backwards and forwards at the bottom and planting them about an inch deep in thumb pots, one in each pot, when they generally become fine plants and flower well. When the grower has no frame or hand-glass he must keep the potted cuttings close to the window glass of a room, so that they may have abundance of light; and if a

fire be kept in the room so much the better, though it is by no means so effectual for the rooting of the plants as stove heat. The cuttings may be protected out of doors, by covering them with inverted glass tumblers or jelly pots, but if a severe frost occurs, they must be put under cover, or their destruction is inevitable.

I find that in my practice the best method of forwarding Dahlias is to place for bottom heat tan or well rotted dung in a frame, the cuttings and young plants being moderately watered, giving as much light as possible, till the small pots are filled with roots, when they must be repotted into larger sized pots, using a compost of one third sandy loam, or common garden earth, one third leaf mould, or cow dung two years rotted, and one third white sand or scrapings. After this process is performed they must still be kept in a slight bottom heat till they are re-established in the pots; after which it is better to keep them in a greenhouse in a cold frame, or in the window of a room close to the glass, where no fire is kept; or if the weather be mild they may be set out of doors under well matted hoops, exposing them only for a short time, but before May this is hardly safe.

I have read in an Instructive Publication, that the growers who propagate for sale, prepare their hot beds in February, or the beginning of March, in order to have their plants ready to send out in May; but as that month is too early to risk the planting out of tender or valuable sorts, it is unnecessary for those who cultivate, for their own amusement, to prepare their hot bed before Lady-day, or the beginning of April. It may be made of fresh hot stable dung, something larger each way than the frame intended to be set on it, and after it is made up it must be allowed to ferment about a week, for the heat to subside a little. When the frame is to be put on, three inches of sandy soil should be sifted over the dung on which the tubers are to be laid, and covered with similar soil, or with dry moss, taking care to leave the crown of the tuber above the level of the soil. If much heat arise, the back of the lights must be raised a little so as to admit the fresh air and permit the escape of the steam; but at night matting secured from being blown off by the wind will be requisite unless the weather prove very mild, and must from time to time be sprinkled with warmish water. When the eyes push

out shoots, more light will be wanted than before, but greater care will also be necessary to guard against cold at this uncertain season of the year.

AN AMATEUR.

ARTICLE VII.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 112.)

In addition to the trees and shrubs, which will be noticed in this work as flowering the latest, aid should be borrowed from such autumnal flowers as continue gay until the approach of winter. The towering hollyhock, when half concealed, and half seen through the shrubs and evergreens, is one of the boldest enliveners of the plantation at this season. This plant yields to none in beauty of form, majesty of carriage, or gaiety of colour its hues proceed through all the tints of crimson, from the palest rose to the deepest purple; and from the purest white through all the shades of yellow, orange, and iron-brown. The tall sun flower should also figure in the back ground; and the middle space may be allotted to the richly varied delea of the western world. The foreground is to be rendered splendid by large plots of the asters of China, the general tints of which, inclining to blue or purple, contrast well with the more gaudy colours of the African marigold, or the nasturtium of Peru, which latter should be suffered to climb the holly or other trees, exhibiting its flaming petals to enliven the closing year.

In young plantations, where the evergreens have not spread sufficiently to cover the surface, clumps of wall-flowers are exceedingly ornamental, and their green, which is of the most agreeable tint, lasts through the winter, they often flower both late in the autumn and early in the summer. The periwinkle is also an excellent running plant to cover the slopes and banks of the shrubbery, as its blue flowers are to be seen amidst its ever-green leaves, from March to the middle of November.

It must not be forgotten that England possesses advantages over every other part of the globe for ornamental gardening; first the fineness and beauty of its turf, which retains its verdure

throughout the year without much labour or expense ; whilst on the continent, this is obtained only by the assistance or partially concealed means of irrigation. The few lawns that are kept in any tolerably decent order abroad, are generally under the care of Scotch or English gardeners. The gravel of this country is also so superior to that of any other part of Europe for the formation of walks, that the royal gardens of Naples have their paths covered with gravel brought from the distance of Kensington. Perhaps there is no one spot where the plants of the north and south thrive so well together as in the English shrubbery. Added to these advantages, the absence of ravenous beasts and venomous reptiles, are blessings that ought to make us

“ Vain of our beauteous isle, and justly vain,
For freedom here, and health, and plenty reign.”

As it is the skilful distribution of trees over the grounds, more than their peculiar character, which adds dignity to the landscape; so it forms one of the most important parts of the planter's study to discover where to place the rising grove in such a situation as to improve the view. In a flat country, the first care should be to give an additional appearance of height to spots already elevated, by planting upon them the tallest trees that the soil will suit. In parks and paddocks, the belt or long plantation, should generally be avoided, as well as that of the crescent shape, because they prevent a free circulation of air, and render the enclosed atmosphere unwholesome. Oblong or circular plantations, on the contrary, afford the trees an opportunity of benefiting by the air ; admitting, at the same time, a view of the landscapes which they partially intercept.

“ The fountain's fall, the river's flow,
The woody vallies warm and low ;
The windy summit, wild and high,
Roughly rushing on the sky !
The pleasant seat, the ruin'd tower,
The naked rock, the shady bower,
The town and village, dome and farm ;
Each give to each a double charm,
As pearls upon an Ethiop's arm—

DYER.

The principal feature of the park should be grandeur, and the boldest points of the surrounding country should be made subservient to the scenery by that arrangement of the plantation which will give such prospects the greatest advantage. Yet should the park exhibit some signs of refinement, by the softening down of particular parts by means of varying tints, so as to give greater contrast to the natural scenery.

"Here groves arranged in various order rise,
And bend their quiv'ring summits in the skies.
The regal oak, high o'er the circling shade,
Exalts the hoary honours of his head.
The spreading ash a differing green displays,
And the smooth asp in soothing whisper plays,
The fir that blooms in spring's eternal prime,
The spiry poplar and the stately lime."

ARTICLE VIII.

ON WATER AND WATERING PLANTS.

(Continued from page 284.)

"THOSE persons who are conversant in Agriculture will easily submit to this.

They are well aware that though their earth be never so rich and good, and so fit for the production of corn and other vegetables, yet unless the parts of it be separate and loose, little will come of it.

It is therefore upon this account that they bestow the pains they do in the culture of it, ploughing, harrowing, and breaking the clodded lumps of earth.

It is the same way that sea salts, nitre, and other salts promote vegetation; and he says he is sorry that he cannot subscribe to the opinion of those learned gentlemen, who imagine that nitre is essential to plants, and that nothing is acted in the vegetable kingdom without it.

For by all the trials he has been able to make, the thing is quite otherwise; and when contiguous to the plant, it rather destroys it than otherwise.

But this nitre and other salts certainly do; they loosen the earth, and separate the concreted parts of it; and by that means

fit and dispose them to be assumed by the water, and carried up into the seed, or plant, for its formation and augment.

There is no one but must observe how apt all sorts of soils are to be wrought upon by moisture, how easily they liquate and run with it; and when these are drawn off, and have deserted the lumps wherewith they were incorporated, those must moulder immediately and fall asunder of course.

The hardest stone, if it happened as it frequently does, to have any salt intermixed with the sand of which it consists, upon being exposed to a humid air, it in a short time dissolves and crumbles all to pieces; and much more will clodded earth and clay, which is not near of so compact and solid a constitution as stone is.

The same way likewise it is that lime is serviceable in this affair. The husbandman says of it, that it does not fatten but only mellow the ground. By which they mean, that it does not contain anything in itself that is of the same nature with the vegetable mould or afford any matter fit for the formation of plants, but merely softens and relaxes the earth, and by that means renders it more capable of entering the seeds and vegetables set in it, in order to their nourishment, than otherwise it would have been.

The properties of lime are well known and how apt it is to be put into a ferment and commotion by water; nor can such commotion ever happen when lime is mixed with earth, however hard and clodded that may be, without opening and loosening of it.

Observation 4. The plant is more or less nourished and augmented in proportion, as the water in which it stands, contains a greater or smaller quantity of proper terrestrial matter in it.

The truth of this proposition is so eminently discernable through the whole process of these trials, that, he thinks no doubt can be made of it.

The mint in the glass C, was much of the same bulk and weight with those in A and B; but the water in which that was, being river water, which was apparently more stored with terrestrial matter than the spring or rain water, wherein they stood, where it had thriven to almost double the bulk, that either of them had and with a less expense of water.

So in a like manner the mint in L, in whose water a quantity of good garden mould had been dissolved, though it had the disadvantage to be less, when it was first set, than either of the

mints H or I, the water of which was the very same with that in L, but had not any of the earth mixed with it ; yet in a short time, the plant not only overtook, but much outstript all those ; and at the end of the experiment was very considerably bigger and heavier than either of them.

Also the mint in N, though it was less at first than that in M, being set in that turbid, thick, succulent water, that remained behind after that wherein M was set, was distilled off, had in the end more than double its original weight and bulk, and received above twice the additional increase, which that in M had done, which stood in the thinner distilled water, and which is as considerable, had not drawn off half the quantity of water which that had.

The reason why in the beginning of this article he limits the proportion of the augment of the plant to the quantity of the proper terrestrial matter in the water, is because all, even the vegetable matter, to say nothing of the mineral, is not proper for the nourishment of every plant.

There may be, and doubtless there are some plants that are much alike in different species of plants, and so owe their supply to the same common matter ; but it is plain all cannot. And there are other parts so differing, that it is no ways credible, that they should be formed all out of the same sort of corpuscles ; nay, it is so far from it, that there does not want good indications, as will be seen by and by, that every kind of vegetable requires a peculiar and specific matter for its formation and nourishment, yea, each part of the same vegetable does so ; and there are very many and different ingredients that go to the composition of the same individual plant.

If therefore the soil, wherein any vegetable or seed is planted contains all, or most of these ingredients, and those in due quantity, it will grow and thrive there, otherwise it will not.

If there be not as many sorts of corpuscles, as are requisite, for the constitution of the main and essential parts of the plant, it will not prosper at all. If there be these, and not sufficient plenty, it will starve and arrive at its natural stature ; or if there be any the less necessary and essential corpuscles wanting, there will be some failure in the plant. It will be defective in taste, in smell, in colour, or some other way.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. **CEREUS PENTALOPUS** var. **SUBARTICULATUS.** *Five winged Cereus* [Bot. Mag. 3651.

CACTEÆ. ICOSANDRIA MONOGYNIA.

This very pretty flower and rare species has bloomed in the fine collection of Messrs. Mackie, Norwich. The flower is nearly four inches across, of a fine rose colour, merging nearly into a white centre, where the yellow anthers, and dark blue and green anthers, which show in a neat contrast with the other colours.

2. **CRYPTOCHILUS SANGUINEA.** *Blood coloured flower.* [Bot Reg. 23.

ORCHIDACEÆ. GYNANDRIA MONOGYNIA.

This very pretty orchideous plant is a native of rocks in the northern provinces in India. It has bloomed in the fine collection of Messrs. Lodiges's. The plant belongs to the section Epidendræ, and bears affinity to Acanthophippium. The flowers are produced in spikes, of twelve or more upon each, of a bright scarlet colour. *Cryptochilus*, referring to the concealed lip.

3. **ECHINACEA DICKSONIA.** *Mr. Dickson's* [Bot. Reg. 27.

ASTERACEÆ. SYNGENESIA POLYGAMIA.

A native of Mexico, the seeds of which were presented to the London Floricultural Society by G. F. Dickson, Esq. The plant is a perennial, probably hardy enough to endure an ordinary winter in the open border; but as the roots bear being taken up and preserved through the winter in dry sand in a similar way to which some persons preserve the Dahlia, it is advisable to take the same precaution with it. The plant blooms from the early part of August to the end of September or later. The flowers are very showy, of a carmine rose-colour, slightly streaked with white, having a yellow centre, each bloom about four inches across, they are produced very numerously. Blooming so late in the season, the plant rarely produces seeds in the open air, when such are desired it is advisable to take a plant into the greenhouse, where by blooming earlier, seeds are readily obtained. The plant does not bloom the first season, so that the plant requires to be sown as an half hardy annual in March, and be planted out in the open border about the middle of May. *Echinacæ*, from the adjective *Echinaceus*, bristly, alluding to the sharp scales of the receptacle.

4. **EPIDENDRUM OCHRACEUM.** *Yellow Ochre coloured.* [Bot. Reg. 26.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of several parts of tropical America, Messrs. Lodiges's possess it, and received it from Oaxaca, Mr. Skinner discovered it in Guatamala. Captain Sutton brought a plant from thence to this country, and presented it
VOL. VI. No. 64.

N

to Sir Charles Lemon, in whose collection at Carcleu, it bloomed in 1836. The flowers are produced in a scape, which rises to the height of six or eight inches, each scape having ten or twelve. The sepals are of a dingy brown outside and paler within. Labellum of a purplish white; each flower is about half an inch across.

5. BARTONEA AUREA. *Golden flowered.*

[Bot. Mag. 3649.

LOASEA. ICOSANDRIA MONOGYNIA.

This is a very fine and showy annual, growing about three feet high, and flowering very freely. The blossoms are of a fine yellow, near three inches across, resembling a yellow *Oenothera*. *Bartonia*, in compliment to Dr. William Barton of Philadelphia.

6. REHMANNIA CHINENSIS.

[Bot. Mag. 8653.

SYNONYM, GERALDIA GLUTINOSA, DIGITALIS GLUTINOSA.

A native of China, growing upon the walls around Pekin, where it was collected by Dr. Bunge. The plant grows to about a foot high, the flowers resemble in form the well-known *Mimulus glutinosa*, but the colour and marking is very similar to *Justica picta*, or bicolor, of a yellowish white, with dark centre and striped, the outside of the flower purple. It is a very pretty and interesting plant, requiring to be grown in the greenhouse.

7. PIMELEA INCANA. *Hoary*

[Bot. Reg. 26.

THYMELLACEA. DIANDRIA MONOGYNIA.

Seeds of this new species were sent from Van Dieman's land to Miss Copeland of Leighton, in whose collection it has recently bloomed. Though the plant was raised from seed in 1834, it is now a bushy plant, attaining the height of five feet. The plant is a profuse bloomer. The flowers are white on the upper side, and pink beneath.

New or Rare Plants noticed at different Nurseries.

ONCIDIUM TETRAPETALUM. This beautiful flowering little species was sent from Jamaica by J. H. Lance, Esq., and it has bloomed in the London Horticultural Societies' garden. The flowers are small, the labellum is of an alabaster white, excepting its base, which is yellow and brown. The petals and sepals are spotted, streaked and barred with brown, and the column has two large spotted wings.

COMESPERMA GRACILIS. A neat greenhouse climber, the flowers are small but are produced in profusion, they are of a bright blue colour, and have an interesting appearance. It has bloomed with Mr. Young of Epsom.

ZICKIA MALLE. A very pretty flowering greenhouse plant, which has recently bloomed with Mr. Lowe of Clapton nursery, the flowers are very similar to *Kennedia coccinea*, and have an interesting appearance.

JASMIMUM LIGUSTRUM a handsome greenhouse species with white flowers which are delightfully fragrant.

CLEMATIS MONTANA. This new and interesting species is in the collection of Mr. Groom of Walworth. The flowers are white, and probably it will prove as hardy as *C. Sieboldii*.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON FUCHSIAS, &c.—A constant subscriber would wish to see figured in the Cabinet, at some early occasion, one or two figures of the new high priced Fuchsias; and he would be glad to know where the new *Datura Gauyaquilien-sis* can be procured, its price, and a few hints on its culture; also, where can *Delphinium Barlowi* be procured, and its price,

LIMBRICK.

ON A NEW MODE OF HEATING HOT-HOUSES, &c.—G. R. being informed of a new plan being discovered for Heating Hot Houses and Green-Houses, at a far less expense than that at present in use by steam, or flues, will feel obliged by the Conductor, or Readers of the Floricultural Cabinet, (to which he has been, with many friends, a Subscriber to, from No. 1.,) inspecting the same which is to be seen at the Jerusalem Coffee House, Cooper's Court, Cornhill, London, a report of which he should like to see in the July Number.

G. R.

ON DESTROYING ANTS —Permit me to enquire through your interesting publication the means to be adopted for the destruction of the Ant, which infests the pit of my conservatory, and causes the flowers as well as leaves of the Orange plants in the same to fall off, and the plant to look unhealthy. The pots of Roses, as well as Oleanders are also infested with the said insect. Coal tar, tobacco, snuff, lime, &c., I have severally applied, but all of no avail. Any remedy you, or any of your numerous correspondents, can suggest, will be esteemed a favour, by Sir, your patron and admirer of your Cabinet.

Q.

ANSWERS.

ON FORCING ROSES.—In answer to your correspondent Rosa, relative to Forcing Roses, I have sent a brief account of the best plan I know. He must in the first place collect an equal portion of good substantial loam, rotten leaves, and very rotten dung from an old cucumber bed, mixing them well together, then procure some pots from nine to twelve inches in diameter, putting three plants in a pot; I repot the plants I forced last January and February about the latter part of August, then let them remain in the open air until December, when I remove them into the hothouse, but before I take them there I cut back the young shoots to two or three eyes of the old stem, For the first three weeks I keep the house to sixty or seventy degrees of heat, then I increase it to eighty or ninety degrees: I would not recommend forcing them sharp in the first place, as that prevents their breaking strong, and consequently there would not be so many flowers, but if your correspondent follows the plan I have before recommended, he will find it to answer his expectations.

R. J. W.

REMARKS.

ON DEFORMED FLOWERS, &c.—A lady residing in the neighbourhood of Bathurst, New South Wales, has observed some curious phenomena in her garden, which she thinks of sufficient interest to be inserted in the pages of

the Floricultural Cabinet; as some of its readers may be able to account for these singular productions of nature. Mignonette (for instance) would here and there throw out a strong shoot, resembling tree mignonette, without perfume; and the seed pods formed without seed in them, and larger than usual. Out of those pods sometimes grew flowering tops of fragrant Mignonette. She has felt much pleasure in cultivating the seeds she brought from England, and has observed in many of the plants she raised, that after the first flower or two had opened, many of the succeeding flowers became green, and scarcely like the flower in shape; somewhat similar to a calyx without a corolla. On the *Hibiscus Africanus*, some shoots flowered very well, and others produced only small, green calyxes. She could only save one *Nasturtium* seed, all the flowers being imperfect, green and diminutive.

A friend in England has regularly sent her the Floricultural Cabinet, from which she has derived much useful information.

The following one hundred sorts of Heartsease were recently exhibited at a Floricultural Exhibition, which are of first rate characters, and obtained the first prize. I took the names of each, and sent the list for insertion in the Cabinet. Those marked with an asterick I considered the best.

X. Y.

*Enterprise	Aurora	Lady Peel
*Masterpiece	*Minerva	*Duke of Marlborough
*Hecuba	Momus	*Do. of Northumberland
*Lord Glammas	Somnus	Richardson's Adelaide
Prospero	Cecilia	*Claude
Nonpareil	Samson	Caravan
*Incomparable	*King	Gem
Cicero	Josephus	Emperor
Royal Lilac	Homer	Diomedes
Beauty of Tottenham	Flora, Roger's	Brutus
Lady Blessington	Do. Hollis's	Scot's Helen
Corinna	Do. Mountjoy's	Countess of Bridge-
*Deademonia superba	Cupid	water
*Diana superba	Jem Crow	Do. of Verulum
Immutabilis	Battersea Beauty	Cato
Donna Maria	Politor	*Andromache
High Admiral	*Emma	*Enchantress
Purpurea perfecta	Incomparable	Matchless
Frogmore Beauty	Vesta	*Pomona superba
Columbine	Romeo	Radical Jack
Nabob	*Lilac perfection	Atropurpurea
*Queen Victoria	Expression	Beauty of Ealing
Purpurea Elegans	Fair Rosamond	Cromwell
Achilles superb	King of Oude	*Chimpanzee
Goliath	Pizarro	(oronet
Queen of Scots	Parragon	Horace
John Bull	Blucher	Laxiflora
Wild's Defiance	Apollo	Nimrod
King's Alfred	Susannah	Beauty of Dalston, Smith
Bacchus	Prince Eugene	Paris
Wallace	Crocea superba	Theresa
*Shakspeare	Hornsey Hero	Glaucus
Comus	Rainbow	Battersea Hero
Royal Purple	Pencilatum	

THE LATE MR. ANDREW KNIGHT, ESQ.—This estimable man known for so many years as the President of the Horticultural Society of London

expired on Friday last, after a short illness, at the house of his daughter-in-law, in Upper Seymour-street, at the advanced age of seventy-nine. He arrived in London on the evening of the 30th of April, in a tolerable state of health, for the purpose of attending the anniversary meeting of the Horticultural Society, on the following day, on which occasion he has, with very few exceptions presided, since his first becoming President in 1811; but the fatigues of the journey, combined with the debility consequent upon his advanced years, prevented his attendance. It was generally remarked by those who had the opportunity of seeing him at the preceding anniversary, that that occasion would be his last; a prediction which has been too truly realized, for the Society of which he was the distinguished head. In their President, the Horticultural Society has lost the principal, if not the sole tie which attached them to the republic of science, and have probably met a loss they can never compensate.

In the future ill-assorted mass which compose their transactions, the hand of the master will be no longer recognized, and death has struck a blow that will do more to annihilate the sophistry and imbecility of their management than any other event that could possibly have happened.

Mr. Knight was born at Wormeley Grange, in Herefordshire, in 1759. His father, be it observed, was a man of much learning and acquirements. Having great power of mind, and living in an extremely quiet and sequestered spot, he was supposed by his ignorant neighbours, in their language, "to know every thing." He died at an advanced age, when Mr. Knight was an infant; an evidence of the respect his knowledge obtained him, whenever his son sought to know in childhood, for any unusual subject, he was told, "that his father would have answered him, but that nobody else could." Being born in the midst of orchards, he observes, "I was early led to ask whence the varieties of fruit I saw, came, and how they were produced. I could obtain no satisfactory answer, and was thence led first to commence experiments, in which, through a long life of scarcely interrupted health, I have persevered, and probably shall persevere, as long as I shall have the power."

Mr. Johnson, the author of a work on English Gardening, published in 1829, thus sums the character of this individual:—"If the question was put to me, who is the most scientific horticulturist now living? who unites to a knowledge of the practices of gardening, the most perfect knowledge of the sciences that assists it? which of living horticulturists have conferred the greatest benefits upon our art? I should quote Mr. Knight, in reply to them all. Whether we follow him in his researches as a physiologist, in his luminous observations and discoveries respecting the sap of plants; as a general cultivator in the numerous papers in every branch of horticulture in the transactions of the Society of which he is President, and especially in the raising of improved fruits and culinary esculents, we find in all, the most ample justification for our opinion, that he is the first floriculturist of our times. Nor is he eminent alone in the higher walks of horticulture, for at Downton Hall, he demonstrates that he is capable of securing the correct performance of every detail of gardening."

Mr. Knight was one of the earliest promoters of the Horticultural Society, his name being inserted in the charter of incorporation first granted to that body. On the death of Lord Dartmouth, the first President, in 1811, he was elected to fill that office, which he held to the period of his decease. Until even the latter period of his life, he was a constant, and almost the universal contributor to the transactions of the Society, whose death will prove a great chasm. Although distinguished particularly for his attention to fruits, he, was well versed in every department of horticulture; and if his researches in vegetable physiology have not tended much to the improvement in that art, they show proofs of enlarged thought. His fortune was not princely, but his gifts to the promotion of science, were munificent, and

his domains in Herefordshire displayed a very interesting development of the principles of modern horticulture.

Mr. Knight was the author of many valuable Works, independent of his extensive contributions to the Transactions of the Royal and Horticultural Societies.

NEW OR RARE PLANTS NOTICED

IN VARIOUS NURSERIES. &c.

At Mr. Grooms, Walworth.—*LELARGE ORNATA*. A new and pretty plant at £5 5s. each, it has not yet bloomed. Also *DIPLODENA DAMPIERII*, £5. each, neither of the species have yet bloomed with Mr. Groom. The Tulips are in most vigorous growth, and are grown in amazing multitudes; one bed is valued at £1500. The shew will be most splendid, and well worth going a considerable distance to see.

At Messrs. Chandler's, Vauxhall.—Their collection of Camellias were in fine bloom. The following were the most superb. *CANEDISSIMA*, *EKIMIA*, *DONCKLERII*, *EXIMIA*, *ROSA SINENSIS*, *PARKSI*, *BEALII*, *VANDESHIA*, *FLORIDA*, *SANGUINEA*, for the description of colour we refer our readers to the excellent lists by Camellia in former numbers. The collection of Hybrid Rhododendrons are in splendid bloom, and some of the kinds are very much superior in beauty to anything we have seen. We shall notice them (more particularly) in our next number. To see them in bloom will amply repay for a journey. A very magnificent Hybrid one we saw in bloom at Mr. Milnes, Stoke Newington Nursery, having seventy-five heads of flowers.

DIASMA CAPITATA.—A beautiful greenhouse plant, forming a neat bush, and blooming most profusely. The flowers are of a bluish-purple. It is as hardy as a Myrtle.

CAMELLIAS. The show was most brilliant, and some of the kinds are grown, to large bushes, ten or twelve feet high, and literally loaded with flowers. To walk amongst them is like going through a forest of Camellias. It would amply repay a visit to view them. We shall remark on various kinds in our next month's number.

ACACIA CULTRIFORMIS.—Messrs. Rollisons of Tooting Nursery, have had this plant beautifully in bloom, bearing a profusion of fine yellow flowers. It is a desirable plant to turn out in a conservatory.

RIBES MENZIESII.—The late Mr. Douglas sent seeds of this rare and little known species from California. The young shoots are densely clothed with slender bristles, very much like *R. Lacustre*, but is very different in its flowers. Those of *R. Menziesii* are of the same colour as *R. speciosa*, with the exception of being a little paler; they are smaller, and without the high projecting crimson coloured stamens, which appear so beautiful in the flowers of this last named species. The plant appears to be quite hardy; it is at the London Horticultural Society's Garden.

DENDROBIUM CANDIDUM.—This new and fine species has been sent from Nungelow, in India, by Mr. Gibson, collector to the Duke of Devonshire, and it has bloomed at Catsworth. The flowers are of a pure white, most powerfully fragrant. The habit of the plant is that of *D. Nobile*; growing erect.

RHODODENDRON SMITHII. The show of this splendid plant was most magnificent at Messrs. Chandlers, we may add, was unrivalled. They possess the original true variety, which far exceeds in beauty some other kinds

which are set out for the original. There was also a splendid show of many other hybrids, with flowers of various hues, certainly the finest kinds we ever saw. Further descriptions of them we will give hereafter.

MATHIOLA ODORATISSIMA. A most interesting plant of the well-known old species, called the Night-scented Stock. The plants are, however, much more vigorous, the flowers more than twice the size, and of a paler colour. They are delightfully fragrant, and the plant merits a place in every collection where a ready access can be had to it in the evening.

Mr. Chandler informed us that during the last severe winter, that all their fine collection of hybrid Rhododendrons, which were growing in the open ground and were raised between *R. Cataubienae* and *R. arborea*, had not suffered in the least, whilst those from *R. ponticum* and *R. arborea*, were all dead.

MILTONIA SPECTABILIS. A new Brazilian Orchideous plant, has lately bloomed at Messrs. Lodiges's, also with J. Baker, Esq., Springfield. The flower is produced in a scape, of only one in each, the sepals and petals are of a pale greenish yellow, and the labellum of a fine violet colour.

REFERENCE TO PLATE.

It being the season when beds of Pansies can be successfully made to bloom during the end of summer, and when they are exhibited at most shows, we have given the present plate as suitable to the time, that our readers may see that the kinds were exhibited, or procure them for cultivation.

The four Pansies we have given are the four most perfect flowers we could find during a tour we have recently made to view and procure all the best kinds, and attending several of the Metropolitan exhibitions, as well as others in the country. We are sorry to state that our engraver has, from not understanding our order correctly, misplaced the names of two of the pansies, which we did not discover, till too late to remedy. The one named Duke of Marlborough, should be "*Ne plus Ultra*," and that named *Ne plus Ultra*, be "*Duke of Marlborough*."

FLORICULTURAL CALENDAR FOR JUNE.

ANNUALS.—See pages 43, and 72, Vol. I.—Those annual plants that have not yet been transplanted out, should now be done, in cloudy and showery weather, keeping as much earth to their roots as possible, now supporting those with sticks that require it—thin out where too thick. Tender annuals may now be turned out into the flower borders; they should be refreshed at least once a day with water, and if the sun be very powerful they will require to be shaded, till they have taken fresh root: those that remain to flower in pots, must be frequently supplied with water, repotting, &c., as they require it. Finish transplanting perennial and biennial plants, sown in spring.

ROSES.—Cutting of Garden kinds may be put off by the middle of the month; insert them firmly in the soil, and cover with a hand-glass—a shady border is the best situation for them. Cuttings of most kinds of Greenhouse plants should now be put off.

CARNATIONS AND PINKS.—Laying the former, and piping the latter, will be required by the end of the month. Seedlings should be planted out singly into pots or open borders. Those Carnations in pots require particular at-

tention in keeping them well supplied with water, and to support the flower stems by tying them to neat green sticks with bass; pipings of the young shoots may still be put in; those cut at the second or third joint make the handsomest plants; they should be kept shaded from the hot sun, otherwise they will soon get scorched and dried up, they should be finished layering by the middle of the month. Pinks may still be propagated by pipings as in June. Auricula plants in pots will require a little water frequently in hot weather taking care not to pour it on the heart of the plant—all dead leaves should be removed—if any of the plants are attacked with the green fly, they should be smoked with tobacco.

RANUNCULUS AND ANEMONE ROOTS.—Should any bulbous rooted plants, as Ranunculuses, Tulips, Anemones, &c., now be past flowering, and their leaves decayed, they should be taken up, well dried, cleaned, and the offsets separated, and put in a cool airy place, till the planting season again commences.—See Articles in Vols. 1. and 2, of the Cabinet.

CAMELLIAS—which have ceased blooming, will now require to be excited by being taken to a higher degree of heat, and frequently syringed, this will induce vigorous shoots and an abundance of flower buds.

CHRYSANTHEMUMS.—See pages 73, 74, and 81, of Vol. I. Plants in small pots should be repotted into larger.

DAHLIAS.—See pages 3, 22, 66, and 95, of Vol. I.; and articles in Vol. 2, and Vol. 3, page 100.

TULIPS.—See page 24, Vol. I.

GREENHOUSE AND STOVE ANNUALS.—Such as have been grown hitherto in small pots, should be repotted into larger for the summer's growth.

AURICULAS—may now be repotted and be placed in a shady, but airy, situation. Transplant seedlings, also of Polyanthuses.

PANSIES—New beds may be made by taking off rooted offsets or by piping, shading them for a few days after removal. Such will bloom profusely at the end of summer.

CAMELLIAS.—If the new shoots have nearly done growing, place the plants in a warm greenhouse, or in a stove at 70 degrees, in order to assist the plants in producing flower buds.

HERBACEOUS PLANTS—in flower beds should regularly be tied up as they advance in growth, not allowing them to grow too far before this attention is given, or many kinds will become unsightly.

BALSAMS.—See culture of, in Vol. I.

TRIVERANIAS.—See Vol. I.

SEEDS of hardy Biennials, as Sweet Williams, Scabious, &c., may be sown for plants to bloom next year.

THE DOUBLE SCARLET LYCHNIS, &c., &c.—The double scarlet Lychnis, and such like plants, should be propagated by cuttings. Dahlia cuttings will easily take root if placed in a brisk heat. Continue to cut box edgings, and hedges, where it was not done last month. Where it is desired to save seed of Ten Week, Russian, or German Stocks, only allow those single ones to remain, the flowers of which have five or six petals: if such be reserved they will generally produce double flowering plants. Towards the end of the month, Roses may be budded: the first week in August is however considered better. An article is sent on the subject for that month.



Euphorbia fulgens.



Petunia marginalis prasinata.



Petunia vittatus.

THE FLORICULTURAL CABINET,

JULY, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE PROPERTIES OF THE TULIP.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, NEAR MANCHESTER.

THE properties requisite to constitute a fine Tulip are as follows. The stem ought not to rise less than from thirty inches to three feet and upwards, from the surface of the bed, strong and elastic, so as to shew the flower to the best advantage, which a short weak stem cannot. A flower must not be despised or discarded because it does not rise to the prescribed height, as there are many fine varieties which does not come up to this standard. The cup of the flower should be proportioned to the stem, that is, a tall stem, should support a large flower, and *vice versa*, so as to appear neither too light nor too heavy, composed of six thick and fleshy petals which should run out from the centre at first a little horizontally and then turn upwards, forming almost a perfect cup with a round bottom, rather wider at the top, the three exterior petals should be larger than the three interior ones, and broader at the base. The opinion that the exterior should be larger than the interior (an effect almost at variance with experience) has been copied by all who have attempted to describe a fine tulip, but in my opinion a flower whose petals are equal in size and form; will, when expanded, present the most admirable

VOL. VI. No. 65.

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form, and make the nearest approaches to that perfection which all florists imagine, but few witness.

The top of each petal ought to be broad and well rounded and perfectly level; the parts of fructification, as the stamens, anthers, and pericarpium, should be strong and bold, and the filaments free from tinge or stain, as those qualities add much to the appearance of a fine tulip when expanded. The ground colour of the flower at the bottom of the cup in a bizarre, ought to be a bright yellow, and in a byblomen or rose, perfectly white and transparent. In a feathered flower, the feathering should be broad and regular, and go quite round the edge of the petal, and not to break out at the end, and show the ground colour, and terminate in fine broken points toward the centre of the petal elegantly pencilled. The centre of each petal should be quite free from any stripe, spot, stain, or tinge of any kind. The feathering of a fine Bienfail Incomparable, will give the young florist the best idea, for when fine, it is not excelled as a feathered stage flower.

A flamed Tulip must have a beam right up the centre of each petal, as near the colour of the feathered edgings as possible, commencing nearly at the bottom of the petal, and reaching up to the feather at the top of the petal, but not to break through it branching or flaming all the way up on each side of the beam to the feathering at the edge, the feathering at the edges the same as in a feathered flower. The Albion, (or Lortortesque as it is called) and Rose Unique may be considered as specimens of flamed Tulips. The darkest colours in the bizarres rank the first, brown the second, and scarlet the third. In byblomens, black first, dark purple second, and light purple third. In roses, bright scarlet first, crimson or cherry colour second.

The properties thus described are acted upon at all Floral exhibitions in the northern counties, yet it must be admitted that flowers with bad cups and tinged bottoms are often placed first, in preference to a fine cupped flower. This is owing to the feathering of the flower counterbalancing the other bad properties, whilst the one with a good cup, &c. may be very fine in every respect but the feathering and flaming. The southern florists reject as not worthy a place in their collections, what is considered in those of the northern districts as first-rate stage flowers. The northern florists only, in a very few instances, cultivate what is termed bed flowers. If a flower will not come up to their stan-

dard, it is rejected. They appreciate a Tulip possessing a good cup, &c. but it must have the other properties before enumerated combined; for, instance, Charles the Tenth, Count de Vergennes, Triomphe Royale, Surpasse Catafalque, Old Dutch Catafalque, Captain White, Thalestris, Reine de Sheba, Imperatrix Florum, David, Charbonnier Noir, Louis the Sixteenth, Walworth, and many others admired in the south, are also considered by them as first-rate stage flowers when in a good state. I understand that in the south, a Tulip is called fine when it is a large flower, good cup, and bottom free from the least tinge, even if the feathering and flaming is deficient, whilst the northern florists, in addition to a good cup, and bottom free from tinge, that the Tulip ought to be either regularly feathered, or feathered and flamed.

A Tulip is not considered defective in the south, if it has only a straight beam up the centre of the petals, without its branching to the feather, whilst in the north would be thrown aside as possessing neither the properties of a feathered or flamed flower. Also they prefer a light delicate feather to a heavy one, which is quite the contrary in the north.

Having thus briefly pointed out the differences existing in the judgment of the Tulip in the northern and southern districts, I trust that this article will induce florists to fix one standard whereby all Tulips shall for the future be compared. I would suggest that the properties of Tulips be divided into parts, so many allowed for cup, size, and bottom, and the rest for the marking of the flower. This would, of course, obviate all unpleasantness arising from the northern florists sending them what ranks here as first rate stage flowers, which does not possess the requisite properties for exhibition in the south.

All florists must acknowledge that a good cup and bottom add much to the merits of the Tulip, and I do not doubt from the interest now taking in the raising of seedlings, that in time all tinged flowers will be discarded and discountenanced as stage flowers.

J. SLATER.

ARTICLE II.

ON THE CULTURE OF TROPÆOLUM.

BY MR. JOHN FYFFE, GARDENER TO THE REV. WILLIAM MANSFIELD, MILTON
BRYANT RECTORY, BEDFORDSHIRE.

ALTHOUGH all the Tropæolums are easily grown, some care is required in starting them from bulbs. The general way of treating these plants, is to put them into a little heat, but I have found this mode of treatment to be hurtful to Tropæolum tricolorum, when first exciting it from a dormant state. If the bed is fresh and a strong heat, it is in danger of being scorched, even if you succeed in its starting, as this species is so very tender in the first stage of its growth.

The method which I have found to be most successful in growing the more tender sorts of these interesting plants from bulbs, is to pot them in a mixture of good rotten leaves, peat, loam, and sand; say one part of each, or one-half leaves, one-fourth loam, and one-fourth sand, placing the bulb in the centre of the pot, leaving the crown all exposed on the surface of the pot, and placing the lower extremities in a layer of white sand, which protects it from rotting if overwatered, and to guard more effectually against this, the pot should be well drained, and very little water given; until such time as the bulb is in a growing state the pot should be placed in some airy part of the greenhouse, and a bell glass put over it. If the weather is hot, and much sunshine, a little shade should be put over it during the heat of the day, and the glass must be daily wiped to clear it of the condensed vapour, and left off for a time as in the treatment of cuttings.

The most successful mode of growing Tropæolum pentaphyllum and tricolorum, is from cuttings, in the autumn, winter, or at any season, when the plant shows a tendency to decay; take the tips of each shoot, about three or four joints from the point and put them in sand and leaf mould in equal proportions, mixed well together; if in the winter, place them in the greenhouse covering them with a bell-glass, but if in the spring or summer, in a hot frame, they will strike in a few days, and make fine plants before autumn.

P. S. I am trying an experiment with Tropæolum tuberosum, which, when accomplished, I shall feel a pleasure in forwarding to you, perhaps it may be of use to the readers of the Floricultural Cabinet.

J. FYFFE

(We shall be highly obliged by the favour.—CONDUCTOR.)

ARTICLE. III.

A DESCRIPTIVE LIST OF CAMELIAS.

BY CAMELLIA.

(Continued from page 30.)

- Thompsonia superba*, double rose, very good.
Triumphans alba, double, white, small pink stripe, fine.
Serratifolia, double, fine dark red.
Pelegrina, double white, dark red spot or stripe, extra fine.
Acutifolia, double red.
Foordii, double light red, fine form.
Carnescens, single, pale red.
Revesii, double, red, small foliage.
Emma, double, pale white, large and fine.
Celestina, double, light rose, fine form, extra
Flavescens minor, double, buff or blush, good.
Egertonia, double, dark red, Warratah form.
Campanulata, double, dark red, very good.
Folia variegata, single striped leaved.
Grunellii, double, white, fine, large, extra good.
Atroviolacea Serni, double, fine red.
Linnea superba, double, dark red, very fine.
Nivea, double white, good.
Parksii, double, red, white stripes, good.
Wiemeriana Serni, double, flesh colour.
Rugosissima, single, red, large and fine
Lady Henrietta, double, rose, mottled.
Alnutii superba, double, light red, good.
Variegata major, double white, red stripes, very good.
Dianthiflora lineata, double, white, rose stripes.
Lombardii, double, red, white spots or stripes, extra fine.
Gloriosa, double, light red.
Gloriosa alba, fine white, good.
Eclipse rosea Presses, double, blush, red stripes, fine.
Victoria Antiverpensis, double red, white centre, fine.
Lady Grafton, double, light red, good.
Atrococcinea, double, dark red, white centre, very fine.
Princeps, double, fine red.
Ruckcrii, double dark red, good.

Carminca, double, carmine, fine
Crassinervis Serni, double, light red
Eliza, double, fine white, very good.
White Marratah, Knight's double white.
Lindleyii, double, light rose, good.
Masterii, double, red.
Pictorum rosea, double fine rose, good.
Rubro pleno major, double, red, large and good.
Speciosa rosea, double, fine rose, good.
Helvola, double, red.
Credoca, double, fine red, white spot or stripe, fine.
Thompsonii, double dark red, good.
Eleata Cunninghamis, double, red, very good.
Grandiflora alba, double, large white, good.
Amanda, double, fine red, large flower.
Rosea Denholuis. double, light rose.

(To be continued.)

ARTICLE IV.

ON WINTERING THE CARNATION.

BY AN OLD FLORIST.

As the health and vigour of the Carnation depend greatly upon the method in which it is treated during the winter months, if the following method which I pursue is worthy of a place in your Cabinet, it is at your service. For several years I tried different methods of treatment, and I will here mention one or two of my first attempts to shew how much may be gained by persevering to attain any object you may have in view. After I had potted my layers and they had taken root, I prepared a bed which I considered suitable for my purpose, the sides and ends of which I boarded from eight to ten inches high; at the bottom of this bed I put cinder or rough ashes, filled even with sifted ashes; into this bed I plunged my pots, and made an arch of hoops over them covered with mats to protect them from the inclemency of the weather, during the frosts of winter. The mats were joined together with a pole, sown to the ends of the mats on each side to enable me to roll up the covering which rested on the top of the arch, when the weather was fine, but during severe weather they

were constantly kept down, and always during the winter nights. I found my plants with this treatment, do very well till some time after Christmas, when we had a long continuance of rain, snow, and frost, and all the care I took by supplying extra mats, I could not help the plants being constantly damp, both in grass and roots, they soon began to shew a sickly appearance, the hearts becoming a pale green, and eventually a great many dying altogether, those that survived becoming very weakly, and the flowers of course very diminutive.

After the failure in my last attempt I thought I would try the method of a friend of mine who was supposed to be a Carnation grower of great eminence, his plan was in a great measure similar to the last, with the exception of his being more careful to exclude the external air during severe frosts, and used raised frames, Although the plants were certainly more healthy by following this method of treatment, yet they did not produce such fine flowers as I had anticipated, perhaps it was only the mild winter that gave them the superiority over the others. After having tried various experiments repeatedly for several years, altering my mode of treatment each year, I found that the Carnation was a very hardy plant, and would, if placed in a southern aspect, stand in the open border during the severest winters in this climate; it is a plant of all others, that delights in a free, dry, and brisk circulation of air.

Being thus convinced of its perfect hardy nature, and seeing the bad effects resulting from nursing and confinement, having observed that when the plants were placed in an airy situation they throve much better than when they were confined, I erected a glazed roof about eight feet in width and between fifteen and and twenty in length, just as it suited my convenience; this roof I had supported with uprights, about nine feet high in the front, and seven at the back, perfectly open on all sides, so that a free current of air might pass through it; the front or higher part faces towards the south; from the back uprights, about four feet from the ground, I caused to be made a series of shelves, wide enough to hold two pots, and graduate them to about three feet high, the lower shelf being as wide as convenient, by this means I have a complete command of my plants.

The layers, when taken off, I frame for a week or ten days closely, or until they are well-rooted, and appear healthy, when I take them out and stage them, by this mode of treatment they

are exposed to all weather, have a free circulation of air, and at the same time they are protected from rain or snow, and what is of more consequence, they are above the influence of the damps and dews which greatly injures them when nearer to the earth. By thus treating my plants, they are never affected by any cankered spots on the leaves, and always preserve a beautiful healthy green appearance.

When the weather is mild, during the winter, I frequently syringe them, or water with a fine rose in the morning, if necessary, but if the winter should be very severe, and frost and snow prevail for a length of time, I always protect them by nailing mats or canvas to the uprights all round the stage, but as soon the weather becomes more genial, it is immediately removed, so that the plants may have the free circulation of the air as soon as possible. If snow or rain is suffered to fall upon them, and afterwards becomes frozen, seriously injures them, and should, on that account, be carefully guarded against. I found by this method the time saved is immense, there is no lifting up and down of lights, no closing or unclosing of frames, no stooping or trouble in the regulation of the plants, as they are easily removed to any situation in which I choose to place them.

This covering answers two essential purposes, that of wintering and also blooming under, being a great protection to the flowers when the weather is wet. It is for this purpose that it has the elevation stated, but others may find a variation requisite, but that of course has nothing to do with the plan which I consider to be the best mode for wintering this beautiful flower. If the reader of this article be a cultivator or amateur, by following this method of treatment, he will be fully compensated for the trouble and expense he might have been at, by always having a fine bloom of that most beautiful flower.

AN OLD FLORIST.

ARTICLE V.

OBSERVATIONS ON THE WEEVIL (AETHIONOMUS POMORUM).

BY R. T. W. T.

The cause of blight has been frequently ascribed to the prevalence of certain winds, whereas naturalists have traced all the mischief arising therefrom to the attacks of various kinds of in-

sects. The following account in the *Entomological Magazine*, of the Weevil, which infests apple trees, is so graphic, that I cannot resist transcribing it for the edification and amusement of the numerous readers of your periodical.

“ By carefully examining the bark of an apple-tree in the winter, you will occasionally find a pretty little beetle in the cracks, which, immediately on being touched, shams dead, and drops on the ground, where you will not, without great difficulty discover it on account of its great similarity of colour; you must therefore hunt till you find another. This time as soon as you see him, place your hand below him, then touch him lightly with a little bit of stick, and he will drop into your open hand; his own scheme for self-preservation will beat him. Now roll him into a quill or pill-box, and take him home. Place him in a sheet of writing paper, and you will soon see his shape. The head is furnished with a trunk, from which, on each side springs a feeler bent at right angles forward, so that the trunk altogether looks to be three-pronged like a trident. The thorax and wing cases are brown, beautifully mottled, and an oblique line on each, pointing towards the meeting of the wing cases, is much lighter coloured and gives the little beetle the appearance of having a letter V obscurely chalked on its back. Its size altogether is rather less than a hemp seed. With the first sun shiny day in March, these Weevils leave their winter-quarters, crawl up the trunk, and along the twigs, perch themselves so that they might receive the full benefit of the sun's rays, and plume themselves with their legs and feet all over, trident and all, just in the same manner that a cat washes her face with her paws; then they put out one leg at a time, cramped, no doubt, by the long confinement; they lift up their wing cases, and unfolds two large transparent wings, though twice as large as the wing-cases, were neatly folded up and hidden under them, and then launching themselves into the air, they go roving about the orchards and gardens, their little hearts in an ecstasy of freedom, and love, and happiness. It is not long before each find a suitable mate: no relations raise objections, and the nuptials are consummated without further delay. Now I will allow the gentleman Weevil to go his way in quest of a new lover, and other conquests; and in the meantime I will observe the conduct of the lady. By the time the female is ready for the important task of depositing her eggs, the spring has considerably advanced, the apple buds have burst, and the little

Vol. VI. No. 65.

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bunches of blossoms are readily to be distinguished. The Weevil soon finds them out, and selecting a blossom every way to her mind, commences her operations. The beak or trunk, before alluded to, is furnished at its extremity with short teeth, with these she gnaws a very minute hole in the calyx of the future blossom, and continues gnawing until her trunk is plunged in up to her eyes; the trunk is then withdrawn, and the hole examined with the nicest scrutiny, by the introduction of one of her feelers or outer prongs of her trident. If it seem to require any alteration, the trunk goes to work again, and again the feelers; at last, being fully satisfied that the work is well accomplished, she turns about, and standing with the extremity of her abdomen over the hole, thrusts in her long ovipositor, an instrument composed of a set of tubes, retractable one within the other, and then deposits a single egg (never more) in the very centre of the future flower. Another examination with her feelers now takes place, and when she is satisfied that all is right, away she flies to perform the same operation again and again, never tiring while she has an egg to lay. The bud continues to grow like the other buds, the little perforation becomes invisible. By and bye the egg bursts, and out comes a little white maggot, with neither legs nor wings, which, directly it is hatched begins to devour the young tender stamens, next to these the style is attacked, and eaten down to the fruit, the upper part of which is quickly consumed; the maggot is now fully fed, casts its skin, becomes a *crysallis*, and lies perfectly still. Up to this time the blossom has continued healthy, no trace of this enemy being to be discovered without, but when the neighbouring blossoms are expanding their petals to the genial breath of spring, those of the mutilated bud remain closed, and retain the arch ballon-like appearance of a bud about to burst. For a few days they preserve their lovely pink colour, and then by degrees fade to a dingy brown. In this state they remain, until the other apples are well knit, and then the damaged blossoms, by their decided contrast appear very conspicuous. On opening these brown or rather rust coloured blossoms, about the 10th or 15th of June, the *crysallis* will be found to have changed to a perfect beetle, similar to its parent above described, which, if it had been left to itself, would, in a few days, have eaten its way through the weather-beaten case of dried petals, and left its prison house, flying about to take its pleasure, until the chilly winds in autumn should

drive it to its winter habitation, under the bark ; and in the next spring the whole round of operations, through which we have watched its parent and itself, would be performed with the same unvarying unerring instinct. The cloudy misty east wind in which our gardeners see the blight, is the very weather of all least favourable to these Weevils. The fine, clear, sunny days of March are most favourable to them.

The tom-tits, sparrows, bullfinches, and other birds, which at this season of the year, are persecuted with relentless hostility by the farmer and gardener, live during these months solely on those Weevils and similar little insects ; and consequently are the only check on their increase which we possess ; so that in the first investigation of blight, we see how a little prejudice, superstition, and ignorance, tend to increase the injury they dread.

ARTICLE VI.

OBSERVATIONS ON STRIKING CUTTINGS IN PHIALS OF WATER.

BY AN OLD SUBSCRIBER.

I HAVE profited by a hint in one of your Numbers, about striking cutting in phials of water, plunged in a slight hot-bed, as follows : Melon, Cucumber, Pot-herbs, Geraniums. Myrtles, Antirrhinum, Chrysanthemum, Rose, Carnation, Pink, double Rocket flower stalks, double Furze slips, and a few others. The Dahlia I did not succeed with, the Furze I had tried various ways without success, before I found young top shoots of it slipped, do the best I could ; I shall make a more extended experiment on the method this next year, having, owing to illness, begun late in the season.

AN OLD SUBSCRIBER.

(We shall be glad of the results being communicated for insertion in the Cabinet.—COND.)

ARTICLE VII.

ON WATER AND WATERING PLANTS.

(Continued from page 136.)

BUT though a tract of land may happen not to contain matter proper for the constitution of some one particular kind of plant, yet it may for several others, and those much differing among

themselves. The vegetative particles are commixed and blended in the earth, with all the diversity and variety as well as all the uncertainty conceivable.

It is not possible to imagine how one uniform, homogeneous matter, having all its principles or organical parts of all the same substance, constitution, magnitude figure, and gravity, should ever constitute bodies so egregiously unlike, in all those respects, as vegetables of different kinds are; nay, even as the parts of the same vegetable; that one should carry a rosinary, another a milky, a second a yellow, a third a red juice in its veins; one afford a fragrant, another an offensive smell; one be sweet to the taste, another acid, ascerb, austere, &c. that one should be nourishing, another poisonous; one purging, another astringent. In fact, that there should be that difference in them in their several constitutions, makes, properties and effects, and yet all arise from the very same sort of matter, would be very strange. And so note, that by the bye, this argument makes equally strong against those who suppose that mere water to be the matter out of which all bodies are formed.

The Cataputia in the glass F, received but very little increase only three grains and a half, all the time it stood, though two thousand five hundred and one grains of water had been spent upon it; he will not say the reason was, that water does not contain in it matter fit and proper for the nourishment of that peculiar and remarkable plant. No, it may be the water was not a proper medium for it to grow in; and we know that there are many plants that will not thrive in it.

(To be continued.)

EXTRACT.

ON THE AGAVE AMERICANA. GREAT AMERICAN ALOE.

The Aloe, that patriarch of the flowers, which "blooms once in a hundred years, and whose blossom then are developed with such rapidity, as to occasion an explosion resembling the firing of a cannon," is the theme of a tale that all have heard from their infancy, and to which many still give credence. In regard to the age in which the plants flower, that is extremely uncertain, and depends much upon the health of the individuals, and the degree of heat to which they have been exposed. Many live to a great age, and appear never to flower at all. In warm climates

twenty-five or thirty years, and probably a much shorter period is sufficient to bring them to perfection. The most remarkable instance on record of the early flowering of the American Aloe is that detailed by Mr. Hawkins in the Transactions of the Horticultural Society. This took place in the open ground, at Woodville, near Salcombe, Devonshire, the residence of the late James Cole, Esq., and considering that the plant is a native of South America, more especially within the tropics, it tells more the mildness of that part of England, than any circumstance that could be mentioned. The Aloe was planted in 1804, when it was only about six inches high, and then only two or three years old, within a few yards of the sea shore, yet elevated forty or fifty feet above the level of the water, where it had never any cover, shelter, manure, or cultivation. In 1812, it was more than five feet, and it grew during that summer, nearly the eighth of an inch daily. In 1820, it measured between ten and eleven feet in height, and covered a space, the diameter of which was sixteen feet; its leaves close to the stem, being nearly nine inches thick. In the beginning of June of that year, a stem made its appearance resembling a head of asparagus of an immense size, which, during six weeks grew at the rate of three inches a day, and then gradually diminished in progress; but not till it had attained the elevation of twenty-seven feet from the ground, which was at about the middle of September. The two lowest branches first showed flowers on the 3d September, and others came out in succession from the beginning of October to the end of November, when they all began to lose their colour and decay. There were upwards of forty flowering bunches, each with between three and four hundred flowers, making in all about sixteen thousand blossoms. As the stem grew, the leaves began to wither; and it appears the plant then died. Its age was twenty-one years: the height from the earth when in blossom, twenty-seven feet: the lateral branches, beginning at twelve feet from the ground, were in number forty-two, the lowest projecting two feet from the stem, and gradually diminishing to about a foot and nine inches in length at the top; the stalk where the side branches commenced was twenty inches round, or near seven inches in diameter, gradually tapering to the apex; the branches of flowers (or at least those next the bottom, were from a foot to fourteen inches in breadth.

Although various instances are on record of this plant having blossomed when confined in a pot or tub, and sheltered from the severity of our climate, yet the occurrence is so rare, as to excite a great deal of interest in the neighbourhood where such an event takes place; and I know not whether the variegated leaved variety, which is not uncommon in collections, blossoms with equal readiness; not having myself heard of the flowering of that kind, till that which is here represented threw up its flowering stem in the summer of 1836, at Aiken Head, the seat of Mrs. Gordon, where

the garden is under the management of Mr. Lambie. In this instance, the whole height of the flower-stalk, was only the half of that of Mr. Yates; and the blossoms were few indeed in comparison; yet they came to great perfection, and the plant made a very noble appearance

But the great size and strange form of this plant and the rarity of its blossoming in our collections, are not the only circumstances which recommend the American Aloe to attention. It yields a drink and a fibre of such extensive use in the New World, that it is reckoned, next to the maize and the potatoe, the most valuable of all products which Nature has lavished on the mountain population of æquinoctial America; and no where, perhaps, is it held in greater esteem than Mexico, according to M. Humboldt, from whose "*Essai politique sur la Royaume de la Nouvelle Espagne*," I extract the following interesting particulars on this subject;

"Scarcely," says this distinguished Philosopher, "does there exist a tribe of savages in the world, who are not acquainted with the art of preparing some kind of vegetable drink. The wretched hordes which wander in the forests of Guiana, extract from the fruit of different palms, a beverage, which is as palatable as the European orgeat. The inhabitants of Easter Island, confined to a mass of barren springless rocks, mingle the expressed juice of the sugar cane with the briny water of the sea. Most civilized nations derive their drink from the same plants as afford them food, and whose roots and seeds contain the saccharine principle mingled with the farinaceous. In Southern and Eastern Asia this is rice; in Africa and Australia the roots of ferns, or of some arums; while in the north of Europe, the cerealia afford both bread and fermented liquors. Few are the instances of certain plants being cultivated solely with a view to extract beverages from them. Vineyards only exist west of the Indus; in the Old World, and in the golden age of Greece, the culture of the grape was confined to the countries lying between the Oxus and the Euphrates, in Asia Minor, and in Western Europe. In other parts of the world, nature certainly produces several species of wild vine; but no where has man attempted to collect them around them, and improve their quality by cultivation.

"The New Continent presents the instance of a people who derived their drinks not only from the farinaceous and sugary substance of maize, manioc, and bananas, or from the pulp of some species of mimosa, but who cultivated a plant of the pine apple family for the express purpose of converting its juice into spirituous liquor. In the vast plains in the interior of Mexico, there are large tracts of country where the eye discerns nothing but fields planted with the pitted or maguay (*Agave Americana*). This plant, with its leathery and thorny leaves, and which, with the cactus opuntia, has become naturalized ever since the sixteenth century, throughout Southern Europe, in the Canary Islands, and on the African coasts, imparts a most peculiar character to the Mexican landscape. What can be more strongly contrasted than a field of yellow wheat, a plantation of the glaucous agave, and a grove of bananas, whose lustrous leaves always preserve their own tender and delicate hue of green! Thus does man, in all latitudes, by introducing and multiplying the various vegetable productions, modify at his pleasure the aspect of the country around him!

"In the Spanish colonies there are several sorts of maguay deserving of careful cultivation; some indeed, which, by the length of the stamens, the mode of division of the corolla, and form of the stigma, may, perhaps, belong to separate genera. The maguay or metl, which is grown in Mexico

consists of several varieties of the American aloe (*Agave Americana*), so common in gardens, which has yellow, fascicled, and straight flowers, with stamens twice as long as the divisions of the corolla. This must not be confounded with the *A. cubensis* of Jacquin, (*A. mexicana*, Lamarck, *A. odorata*, Persoon,) which has been erroneously supposed to be the metl or maguay of Mexico, but which is extensively grown in the Caraccas, where it is called maguay de cocuy.

"These plantations extend wherever the Aztèque language is spoken; they cease to the north of Salamanca, and are seen in the greatest luxuriance in the valley of Toluca and the plains of Cholula. There the agave plants are set in rows, distant fifteen decimetres from one another. The juice or sap, commonly called the honey, from its abundant sweetness, is only afforded when the flowering stem is about to appear, so that it is of great importance to the cultivator to ascertain precisely at this period. Its approach is indicated by the direction of the root-leaves, which the Indian always watches and examines with great attention, and which, formerly recurved, suddenly take an upward direction, and approximate as if to enclose the incipient flower stalk. The bunch of central leaves (*corazon*, the heart), next assumes a livelier green, and lengthens considerably; indications which the natives assure me hardly ever fail, and to which may be added several other less striking appearances in the general aspect of the plant. Daily does the cultivator examine his agave plantations, to watch those individuals which promise to bloom, and if he himself entertains any doubt, he appeals to the village sages, the old Indians, whose long experience gives them an unerring precision both of touch and eye.

"At eight years old or thereabouts the Mexican agave generally shows signs of inflorescence, and then the collection of the juice for making pulque begins. The bunch of central leaves, or *corozon*, is cut through, the incision gradually enlarged and covered by the side leaves, which are raised up and tied together at their tips. In this cleft the sap of those parts which were destined to form and nourish the gigantic flower stem is deposited, and this vegetable spring flows for two or three months, and may be tapped three times a day. The quantity of sap is enormous; and the more surprising, as the agave plantations are always made by choice on the most sterile soil, frequently on mere shelves of rock, scantily covered with vegetable earth. Each plant is calculated to yield about one hundred and fifty bottles; and at Pachuca, the value of a maguay, near flowering, is from twenty to twenty five francs, or five piastres. Still, as with the Vine, which may bear a greater or less quantity of grapes, the produce is apt to vary, and cannot be precisely calculated. Instances have, however, been known, of a parent bequeathing a plantation of maguay worth from seventy to eighty thousand piastres,

"The cultivation of the agave is attended with many real advantages above that of maize, wheat, or potatoes, as this sturdy harsh, and fleshy-leaved plant is uninjured by the occasional drought, frost, and excessive cold, which prevail in winter on the lofty Cordilleras of Mexico. It dies after having flowered, or when the central bunch of leaves is cut away, and then a number of suckers spring from the parent root, which increase the plant with extraordinary rapidity. One acre of ground will contain from twelve to thirteen hundred plants of maguay, of which it may be calculated that one in every thirteen or fourteen is always affording honey. Thus the proprietor who sets from thirty to forty thousand maguays is sure of leaving his family rich; though a man must possess patience and resolution to devote himself to cultivating what only becomes productive after an interval of fifteen years. In good soil, the agave blossoms at the end of five years; while in poor ground nothing can be expected under eighteen years; and any artificial means by which the flowering state is unnaturally accelerated, only destroy the plant prematurely, or materially lessen the amount of sap.

"The honey, or juice, is of an agreeably bitter sweet flavour, and ferments readily from the sugar and mucilage with which it abounds, this process being hastened by the addition of some old and acid pulque. This vinous liquor resembles cider, but diffuses a disgusting smell of decayed meat, which Europeans have some difficulty in overcoming. Those, however who have accustomed themselves to the beverage, consider it as strengthening, stomachic, and particularly nutritive, recommending it, peculiarly, to persons of a meagre habit; and I have seen many whites, who, totally discontinuing water, beer, and wine, drink only the pulque, like so many Mexicans. The cause of the fetid smell of this liquor is variously attributed to the mode of preparation, the manure used for the soil, and the different materials in which the fermentation is carried on; and I only regret, that I was unable, for want of proper apparatus, to ascertain this curious point in vegetable chemistry. By distillation a most intoxicating liquor is obtained from pulque, which is called *Mexical*, or *aguardiente* (fire water) of *Mayaguay*. The plant which is preferred for this purpose, appeared to me smaller, and its foliage more glaucous than the common kind; but not having seen it in blossom, I cannot pronounce it to be specifically distinct.

"But not only is the *Agave* the Mexican vine, but it holds the place of Asiatic hemp and the Egyptian paper-reed (*Cyperus Papyrus*). The antient manuscripts of this country consisted in hieroglyphics, often inscribed on a paper made of numerous layers of the *Agave* leaf, macerated in water, and glued together in the same manner as the pith of papyrus and the bark of the paper mulberry of the Pacific Isles. I brought away many antient specimens of this fabric, some as thick as pasteboard, others as thin as fine India paper, which are the more interesting, as all the Mexican records hitherto discovered and still preserved at Rome and in Spain, are inscribed on the skins of the Mexican Deer. No thread is so much prized by physicians in Europe as that which is extracted from *agave* leaves, which are sometimes ten feet long, fifteen inches wide and eight thick, because it is not liable to twist; though the fibre of the New Zealand flax (*Phormium tenax*) excels it in tenacity. Twine, thread and rope are made of it; the latter is employed in the mines, and on the western coast, for rigging the ships. The common juice of the plant, or that which it yields when not about to blossom, is highly caustic, and useful for cleansing wounds; while the thorny points of the leaves, like those of the cactus, used to serve the Indians for nails and needles. The Mexican priests were accustomed to inflict wounds in that manner on their breasts and arms by way of expiation, as do the Buddhists in Hindoostan."

"Rarely as the American *aloe* blossoms in this part of Europe, a friend of mine, who lately visited the shores of the Mediterranean in the north of Spain, tells me that the brown withered flowering stems often stand there as tall, strong and thick as the masts of small vessels in a harbour, and are sometimes used for thatching. The height of this stalk varies from twenty to forty feet, and expands like a rich candelabrum, its arms clustered with golden yellow flowers. An extract from the foliage, when made into balls, will lather water like soap; and finally, the centre of the flower-stalk cut longitudinally is by no means a bad substitute for the European razor-strop owing to the minute particles of *silex* forming one of its constituents, in the same way as the Dutch rushes, or stems of the horsetail (*Equisetum*) are employed to polish ivory and brass. My friend William Christy, Esq. when writing from Guernsey last autumn (1837) says, "in this delightful climate, an *agave Americana* is just coming into flower, in the street of St. Pierre Port. It is twenty five years old, and already thirty feet high; and has always stood in the open air, summer and winter, without any protection."

[Bot Mag.]

REVIEW.

The Fruit, Flower, and Kitchen Garden, &c. By P. NEILL, L. L. D., &c., &c.—We made insertion of this publication in our number for May, and promised further to notice it. The work contains many more remarks upon Fruits and Vegetables, than upon Flowers. The most interesting, connected with the latter, we present to our readers the following extract, on the Flower Garden.

THE cultivation of flowers, if not the most useful, is at least one of the most pleasing occupations of the horticulturist, and has generally shared largely in his attention. It is probable, that at first, flowers, as objects of curiosity, were confined to a few patches or borders in the garden, as is still the case in many old places; but in the progress of the art, and the diffusion of taste, separate departments were allotted to them under the name of Flower Gardens. After some general remarks on style and situation, we shall treat of the component parts of flower gardens, their various decorations, and of floriculture.

The designing of flower gardens unquestionably belongs to the fine arts, involving in it, the exercise of invention, taste, and foresight. Its principals are more vague and evanescent than those of any of the sister arts. The hand of the designer is not here guided by the imitation of Nature, for his work is wholly artificial in its arrangements and appliances; neither does utility come in, as in architecture, to supply a form and frame-work, which it is the artist's part to adorn. "As flower gardens," says Mr. Loudon, the best authority on this topic, "are objects of pleasure, the principal which must serve as a guide in laying them out, must be taste. Now, in flower gardens, as in other objects, there are different kinds of tastes; these embodied are called styles or characters; and the great art of the designer is, having fixed on a style, to follow it out unmixed with other styles, or with any deviation which would interfere with the kind of taste or impression which that style is calculated to produce. Style, therefore, is the leading principle in laying out flower gardens, as utility is in laying out the culinary garden. As objects of fancy and taste the styles of flower gardens are various. The modern style is a collection of irregular groups and masses, placed about the house as a medium, uniting it with the open lawn. The ancient geometric style, in place of irregular groups, employed symmetrical forms: in France, adding statues and fountains; in Holland, cut trees and grassy slopes; and in Italy, stone walls, walled terraces, and flights of steps. In some situations these characteristics of *parterres* may, with propriety, be added to, or used instead of the modern sort, especially in flat situations; such as are inclosed by high walls; in towns, or where the principal building or object is in a style of architecture which will not render these appendages incongruous. There are other characters of gardens, such as the Chinese, which are not widely different from the modern; the Indian, which consists chiefly of walks under shade, in squares of grass; the Turkish, which abounds in shady retreats, boudoirs of roses and aromatic herbs; and the Spanish, which is distinguished by trellis-work and fountains; but these gardens are not generally adapted to this climate, though, from contemplating and selecting what is beautiful or suitable in each, a style of decoration for the immediate vicinity of mansions, might be composed preferable to any thing now in use." It may, however, be remarked, that the

flower garden properly so called, has generally been too much governed by the laws of landscape gardening, and these often ill-understood, and misapplied. In the days of "clipped hedges and pleached alleys," the parterres and flower-beds were of a description the most grotesque and intricate imaginable. At a subsequent period, when the natural and the picturesque became the objects of imitation in the park, there appeared the most extravagant attempts at wildness in the garden. The result has been equally unfortunate. It is not meant that when there are merely a few patches of flowers by way of foreground to the lawn, they should not be subordinated to the principles which regulate the more distant and bolder scenery; but wherever there is a flower garden of considerable magnitude, and in a separate situation, we think it should be constructed on principles of its own. In such a spot, the great object must be to exhibit to advantage the graceful forms and glorious hues of flowering plants and shrubs; and it is but seldom that mere elegancies in the forms of compartments, and other trickeries of human invention, can bear any comparison with these natural beauties. To express the peculiar nature of garden scenery, as distinct from the picturesque in landscape, Mr. Loudon has invented the term *gardenesque*; and, whatever may be thought of the term itself, it is very desirable that the distinction should be preserved.

Two varieties of flower gardens have chiefly prevailed in Britain; one in which the ground is turf, and the pattern, so to speak, is composed of a variety of figures cut out of the turf, and planted with flowers and shrubs; and another, when the flower-beds are separated by gravel walks, without being dispersed with grass at all. The choice of one or other of these varieties ought greatly to depend upon the situation. When the flower garden is to be seen from the windows, or any other elevated point of view, from which the whole or the greater part of the design may be perceived at once, perhaps the former should be preferred. Where the surface is irregular, and the situation more remote, and especially where the beauty of flowers is the chief object of contemplation, the choice should probably fall on the latter. This variety, too, seems preferable, on the principle of contrast, where there are large lawns in the outer grounds, in order that kept (or smoothly mown) grass may not be found every where.

Respecting the situation of the flower garden, no very precise directions can be given, as it must be influenced by the size of the domain, the nature of the lawns, and the site of the mansion to which it is attached. Generally speaking, it should not be at any great distance from the house; and in places where there is no distant view of importance, it may be constructed under the windows. In retired scenes, it is delightful to step out of the drawing-room into compartments of flowers, in the vicinity of a greenhouse or conservatory. On the other hand, when the park is spacious, and the prospects extensive and picturesque, it is perhaps better that the flower garden should be at some distance, but not more than a quarter of a mile, out of sight of the house, and with an easy access in any sort of weather; an arrangement which would give an agreeable termination to a short walk, a desirable matter in most cases, for it has been often remarked that many parts of extensive grounds remain unvisited, because they afford no remarkable object to attract the attention.

The particular form of a flower garden is equally beyond the inculcation of specific rules. Indeed, it may be of any shape, and, except where the dimensions are extremely limited, the boundaries should not be continuously visible. The taste of the proprietor or designer, and the capabilities of the situation, must determine not only the external configuration, but also the arrangement of the interior parts. By judicious management, it may be made to pass through shrubbery, gradually assuming a more woodland character, and groups of trees, into the park on the one hand, and into the kitchen garden or orchard on the other.

(To be Continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. CATLEYA PUMILA. *Dwarf.* [Bot. Mag. 3656.

ORCHIDÆ. GYNANDRIA, MONANDRIA,

This very pretty flowering species was received from John Allcard, Esq. from Esequibo, and it has bloomed in the collection of that gentleman last year. The plant is of a very dwarf habit, but the flowers are large in proportion, each being about three inches across. They are of a beautiful bluish purple colour.

2. DIANTHUS BISIGNANI. *Prince Bisignano's Tree Pink.* Bot. Reg. 29.

SILENACEÆ. DECANDRIA, TRIGYNIA.

A native of the coasts of Calabria and Sicily. It is common on rocks about Palermo. In this country it flourishes best if kept in the greenhouse. The plant being shrubby, and blooming freely, renders it peculiarly interesting. Each bloom is simple, about an inch and an half across, of a beautiful rosy pink colour. The plant would make a fine show in the open border during summer, and might be taken up in Autumn, and be preserved in winter in the greenhouse.

3. EPACRIS MICROPHYLLA. *Small leaved.* (Bot. Mag. 3658.

EPACRIDÆ. PENTANDRIA MONOGYNIA.

This very neat species is cultivated in the Edinburgh Botanical Garden, where it had been sent by Mr. Westland, Dorking, Surrey. The foliage is very minute, and resembles in habit *E. pulchella*. The plant is a profuse bloomer, and its numerous white flowers produce a pleasing effect,

4. FUNCKIA ALBO-MARGINATA. *Variegated.*

HEMEROCALLIDÆ. HEXANDRIA MONOGYNIA.

A native of Japan, probably brought from thence by Dr. Siebald. It has bloomed in the Glasgow Botanic Garden. The flowers are produced on a long raceme, twelve or fourteen upon each. Each flower is from three to four inches long, of a lilac purple colour, edged and streaked with white. *Eunckia*, so named in compliment to Mr. H. C. Funck, an apothecary of Gefreez in Germany.

5. GESNERA FACIALIS. *Gaping flowered.* (Bot. Mag. 3659.

GESNERIACEÆ. DIDYMANIA ANGIOSPERMIA.

A native of Brazil, which has bloomed in the stove at the Glasgow Botanic Garden. The flowers are produced numerously, each raceme having a dozen or more. The corolla is of a rich velvety scarlet outside. The lip white and thin and clouded with dark purple. It is a very handsome flowering species.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON RAISING THE *TROPEOLUM TRICOLORUM* FROM SEED, &c.—Having obtained a plant of the *Tropeolum Tricolorum* three years ago, I succeeded in blooming it to the admiration of all who saw it. The plant produced upwards of a dozen fine large seeds, very different from those I bought of the London seedsmen, which were small and withered, and which soon rotted in the soil, from which I never raised one plant, and as far as I can learn not one of my neighbours either; the seeds produced last season, alluded to, I sowed in fine sandy earth as soon as gathered, but to my great disappointment none of them have vegetated yet, but on examining the pot in which they were sown, I find the seeds very fresh. Now, Sir, if you or any of your numerous correspondents, would be so kind at the earliest opportunity, to let me know what mode of treatment these seeds want, as I am very anxious to increase my stock of so handsome a plant; you would do a service I have no doubt to the public generally, as it seems unknown to most of the propagators how to manage this most splendid of plants, and would also confer a very great favour on a young amateur.

Whitby, May, 24th, 1838.

ON PLANS OF FLOWER GARDENS, &c.—Having been a constant reader of your valuable little book from its commencement, and had some time ago seen some plans of Flower Gardens; I was led to hope that you would have continued to devote a page or so occasionally to the same purpose, I certainly think a plan, not of Flower Gardens only, but of small Pleasure Grounds, both public and private, would be very acceptable to a great portion of your subscribers.* (Query 2d on the striking Geraniums, &c.) I shall also esteem it a favour if you or any of your readers will inform me the best method of propagating the *Grythima Laurifolia*, also the best time to strike cuttings of Geraniums, so as to have them in bloom in the month of May, and not drawn up weak; I struck nine last July, but they are now very much drawn up and rather unsightly as the leaves are decaying, although I have given them as much air as the weather would permit of, and have not had fire more than I was obliged to have; shall also be glad to have your opinion on Dr. Arnot's Stove for Heating Greenhouses, &c.; by condescending to answer the above in your Floricultural Cabinet as early as possible will greatly oblige

AN OLD SUBSCRIBER.

April 9th, 1838.

*[Plans are in the hands of our Engraver, and some will appear in successive Numbers.—CONDUCTOR.]

ON THE FEATHERED HYACINTH.—Will you or any of the numerous readers of the Cabinet, inform me the reason of the flower spikes of the feathered hyacinths dwindling and dying away before they expand. I have a great many which we call feathered hyacinths, and I plant the bulbs in rich light soil, they grow very strong and have strong flower stalks, but always dwindle away before they bloom. I have not had any to bloom for these last two years. I shall be glad to be informed through the medium of the Cabinet how to get them to bloom next year

HYACINTHUS.

ON LOAMY SOIL, &c.—Can you or any of your readers give me the definition of the word "Loam," does it mean merely the natural soil, varying in different localities, or does it always imply something clayey or soapy in the soil. No one hitherto can tell me what "Loam" is:

ECCLESS. NORF.

REMARKS.

ROYAL BERKS HORTICULTURAL SOCIETY;

Under the Illustrious Patronage of the Queen, the Queen Dowager, and the Duchess of Kent. At the annual general Meeting of this Society, held at the Town Hall, Wallingford, on Tuesday last: Edward Wells, Esq., Mayor, in the chair. The routine business of the day having been finished, the following distribution of prizes, &c. for the last year took place.

	£.	s.	d.
Prizes awarded to Members	73	8	6

COTTAGERS.

Prizes awarded for productions	14	6	6
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PREMIUMS FOR SUPERIOR GARDENS, VIZ:—

* The Duchess of Kent's Premium, to John Ford of St. Mary's, Wallington.	5	0	0
* W. S. Blackstone, Esq's Premium, to Robert Francis of St. Peter, Wallingford	2	2	0
* Extra Premium, by the Society, to Robert Francis of St. Leonard, Wallingford	2	2	0
* Miss Blackstone's Premium, to William Bartlett of St. Leonard, Wallingford	1	1	0
* John Marshall, Esq's. Premium, to John Hester of St. Peter's, Wallingford	1	1	0
E. H. Payne, Esq's. Premium, to George Durbridge of Dorchester	1	1	0
Minor Premiums by the Society amounting to	18	11	0
Premiums by Do., for superior management of Bees	2	0	0
Total	£120	13	0

Those marked thus (*) are renting allotments of W. S. Blackstone, Esq., M. P.

ON CLIANTHUS PUNICEUS.—“In the South of England this splendid Plant bears the winters with impunity, and in Devonshire and the Isle of Wight fully authorises the generic name given to it by the learned Solander, (Flower of Glory.) It was discovered by Sir Joseph Banks, in New Zealand, in the northern interior, in 1769, and again by the Missionaries in 1831. Mr. Curtis, who has raised numerous plants of it in his extensive nursery grounds at Cayen Wood, has been furnished with the following particulars respecting its introduction, &c., to this country, by Mr. Vaux, of Ryde, Isle of Wight, where the plant grows luxuriantly, and blossoms freely in the open air without the slightest protection. Mr. Richard Davis, Missionary Catechist, at New Zealand, sent the seed of *Clianthus puniceus* to the Rev. John Noble, Colman, Terrace, Ryde, who sowed it as soon as it was received, in the autumn of 1831. In the following spring Mr. Colman had several fine plants. In the autumn of 1832 some of the plants had indications of blossoms forming; and in the spring, or rather summer, of 1833, they flowered most beautifully, and produced seed vessels, one of which was forwarded to the London Horticultural Society, and engraved in the transactions of that valuable body. The propagation is extremely simple, cuttings strike readily under a hand glass in any soil, indeed when any bud of the growing plant touches the ground it will take root like a *Mimulus*, or like *Verbena Melindres*, the cuttings appear to succeed equally well, whether stripped off

or cut under a joint, and I have not found any difference as to ripened or green shoots. The native name of the plant, according to Mr. Cunningham, is Kowaingutu-Kaka, or Parrot's-bill, referring to the keel of the flower. *Curtis's Bot. Mag.*

ON *CLIANTHUS PUNICEUS*.—Having recently seen a splendid specimen of this plant in bloom in a greenhouse, planted against a trellis, attached to the back wall. I made some inquiries respecting its treatment in general. An intelligent gardener informed me that he formerly grew the plant in a pot, but requiring to be so often repotted, he resolved to plant it out into the border, the soil of which is a fresh turfy-loam, well enriched with old hot-bed dung: he turned out the plant last August when three feet high, and now (June 1st) it is eleven, and the lateral shoots having been spread, cover a space six feet broad. The whole plant appeared to be a mass of beauty beyond conception. The plant has occasionally been matured with liquid manure.

I was told that it was an error to grow the plant in sandy peat soil, as has been strongly recommended and generally practised, it keeps the plant weakly, and in proportion fewer of flowers, but the more vigorous, the more bloom. I was also told that the plant ought to be grown in the open bed in preference to a pot. The roots extend so rapidly and numerous as to require a vast extent to range in, if the plant is to arrive at its native beauty and grandeur.

The plant thrives well when trained in the open air against a south aspect wall, but it will not endure the cold of winter without protection, but it is easy of culture, and will satisfactorily bear taking up each autumn, and preserved in a cool greenhouse, through winter, and in the spring planted out as before. Cuttings strike very rapidly if planted in sand, and be placed in a gentle heat for a few weeks.

FLORA.

LIST OF PLANTS SUITABLE FOR A FLOWER GARDEN, NOT LIABLE TO BE EATEN BY HARES.—The following list of plants contains those which, when bedded out at Dropmore, are seldom gnawed or bitten by hares or rabbits, except those which are distinguished in the list by an asterisk, which are sometimes gnawed when newly planted. Newly planted things are more liable to injury than such as have been in the ground some time,

Tropaeolum majus flore pleno

Verbena Sabiniana

.. *pulchella*

.. **venosa*

.. **chamaedrifolia*

.. *Melindris*

Bouvardia triphylla

**Heliotropium* sp.

Calceolaria salviafolia

.. *thyrsiflora*

.. *rugosa*

.. *angustifolia*

Oenothera macrocarpa

Pelargonium optabile

.. *Daveyanum*.

.. *pavonicum*

.. *Black Prince*

.. *Fairy Queen*

.. *Scarlets in var.*

Nierembergia calycina

Salvia chamaedrifolia.

.. *fulgens*

.. *Grahami*

Senecio elegans

Kaulfusia amelloides

Mahernia pinnata

Petunia nyctaginiflora

.. *rosea*

.. *praenitens*

.. *Phoenicia*

.. *blanda*

Mimulus roseus

Isotoma axilaris

Alonsoa linearis

.. *acutifolia*

Cinneraria amelloides

Fuchsia globosa.

FROM LOUDON'S GARDENER'S MAGAZINE,

ON *LANTONA SELLOII*.—This very neat and handsome flowering plant has bloomed most profusely when grown in the open flower beds, that I am induced to send a few observations on the mode of treatment I pursued.

I procured a plant in April 1836, and kept it in a warm part of the greenhouse, it bloomed profusely from June to September; I found that cuttings struck as readily as the *Verbena melindris*, I therefore took off during autumn fifty cuttings, which I potted off in November into small pots, and kept them in the greenhouse through winter. Early last May I planted them all out with balls entire, into a raised bed of rich loamy soil in my flower garden; not attending at first to tying up, the plants laid down on the ground, and in a few weeks I perceived the shoots had taken root similar to the roots of the *Verbena*. I allowed them to continue and spread, which they did in such a manner as to cover the soil entire, and the plants bloomed in July, August, and September delightfully, forming a fine contrast to the scarlet and white *Verbenas*. Its beautiful purple flowers making a showy appearance. The plant well deserves the attention of all who possess it. It may be procured very cheap. The plant is not capable to endure the open air in winter, so that a fresh supply of plants has to be raised, every summer or autumn in order to supply the following year.

CLERICUS.

ON SOME NEW PLANTS.

The Quarterly Review, No. 121, gives the following notices of plants which Mr. Moorcroft considered likely to prove valuable in this country if they could be introduced.—Travels in Kathmir, Bockhara, &c. By Messrs. Moorcroft, and Trebeck.

THE PRANGOS.—Prangos Pabularia of Lindley, Asiatic Journal, V. XIX. p. 798, *Silphium* of the ancients, Royle's Botany of the Himalay p. 230. "One of the most valuable sources of fodder in Ladakh, and perhaps in any country; it varies in size according to age, from a single leaf, not more than an inch in circumference, to a cluster of flowers and leaves spreading to a circumference of from twelve to eighteen feet. The head of the Prangos, including leaves, flowers, stems and seeds, is converted into hay for winter fodder for goats, sheep and cows. Considering the value of this plant as forage, its growing in a poor sterile soil, in every variety of site, except actual swamps, and in a bleak cold climate, and its flourishing wholly in independence, without the care and industry of man, it would seem probable that it might be introduced with national advantage into many parts of Britain, and would convert her heaths and downs, and highlands, into store-houses for the supply of innumerable flocks."

"THE LONG-MA or sand grass, furnishes almost the whole of the winter food of the unstabled brood mares and colts of the rajah of Ladakh, of the keary or wild horse, of the yak, and of all the cattle which are left unhoused at that season."

THE PURIK, a small species of sheep, common in Ladakh, Mr. Moorcroft says, "It would be an invaluable appendage to the cottage of the British peasant, as it could be maintained at scarcely any cost. During the day in the summer months, it is pastured amongst the mountains, but at night and in the winter, it finds shelter in a walled yard, or under the roof of its master. In this state it seeks with incessant assiduity grass, straw, chaff, peelings of esculent vegetables, always attends the meals of the family, for morsels of flour cake, barley meal, &c. and will sometimes even nibble a bone."

Though a breed of these little animals might be attended with some expense and difficulty, could not the seeds of a Prangas and Long-ma be more easily procured by some of the numerous botanical collectors or speculators?

(The subject is well worth the attention of any of our readers who have correspondents in those countries. A small portion of seed of each would suffice to sow for the first season, so as to ascertain a satisfactory knowledge of its properties and suitability to this climate, &c. and to a more extended culture, if found worthy of it.—CONDUCTOR)

ON HYBRIDISING PLANTS.—The season for numerous plants blooming having arrived, I suggest to amateurs, nurserymen, and gardeners, the propriety of attending to artificial impregnation of all those kinds of flowers likely to become fertile. We are much indebted to the zeal and attention of a few persons whose efforts have been crowned with abundant success in furnishing our stoves, greenhouses, conservatories, and flower gardens with some of the most ornamental flowering plants; need I state the lilly, calceolarias, petunias, pansies, phloxes, salvias, fuchsias, verbenas, geraniums, rhododendrons, azaleas, &c. &c. A little attention in this process will undoubtedly be rewarded with more than ample compensation, and what is more interesting in plant culture than to have a number of seedling plants coming into bloom. The pleasing anxiety and gratification is extreme. A small pointed camel hair pencil is often needed in the operation, where the blossoms cannot be brought into contact.

May 26th

AN ARDENT ADMIRER AND CULTIVATOR.

REFERENCE TO PLATE.

EUPHORBIA PULGENS. Fulgens-flowered. This very strikingly singular and beautiful flowering species, is a native of Mexico, and requires to be grown in this country in the stove. The graceful habit and appearance of the plant even when not in bloom, in addition to its splendour, when loaded with its brilliant coloured flowers, render it a most charming plant, and it certainly merits a place in every collection of hothouse plants.

It grows very rapidly, so that a small plant obtained soon increases to an ornamental object. Cuttings inserted in sand, strike root very freely, and plants can be purchased at a very reasonable price. A compost of equal parts of sandy peat and rich loam, appear to suit the plant best. *E. splendens* is a very beautiful flowering species, but the present kind very far excels it in elegance and splendour.

PETUNIA MARGINATA PRASIMA. Mr. Luke's grass green-edged Petunia. The singularity and beauty of this very distinct variety is most striking. When the drawing was sent us, we were much struck with it, but far more so when we got plants of it in bloom. It was raised by Mr. Luke the very intelligent gardener to Earl Morely, who kindly presented it to us. The improvement that has been effected with the Petunia is certainly striking, we now possess twenty very distinct varieties, some of them very handsome. The fact that the plants are of very rapid growth, profuse in blooming, easy of increase, and their being so suitable to train over the surface of a bed at any desired height, or to train against a trellis, or to be kept as ornamental bushes, alike render them deserving a place in every flower garden or greenhouse. When once a variety is obtained, it is very easily kept by putting off a number of cuttings in a pot, during the end of summer, being thus kept through winter and potted off in spring. A bed of them can be most readily provided. A number of varieties grown together in a bed, produce a very pretty effect.

PETUNIA VITTATA. Striped flowered. Is another of the pretty varieties recently raised, and which we obtained.

FLORICULTURAL CALENDAR FOR JULY.

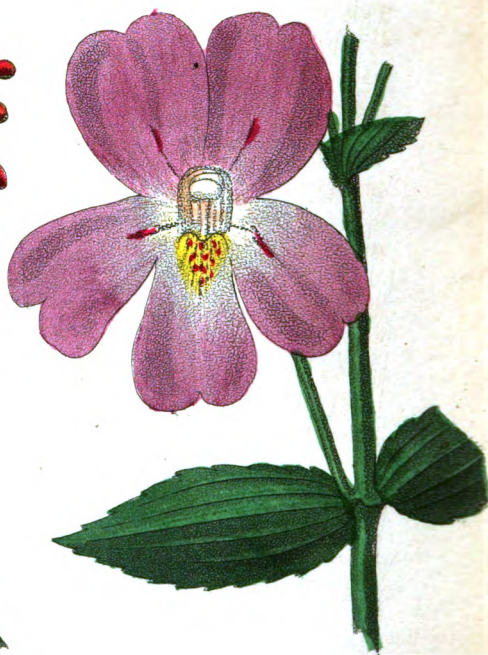
Take up the remaining tuberous root, such as *Anemone* and *Ranunculus*, finishing by the end of the first week; fill up their places and any vacancies that have occurred, with annuals from the reserve ground. Propagate herbaceous and other plants that have gone out of flower, by means of cuttings and slips; also roses and American shrubs, by laying, budding, or cuttings.



Stanhopea oculata.



Chorizanthe cordata.



Mimulus Harrisonia.

THE
FLORICULTURAL CABINET,

AUGUST, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE TREATMENT OF *TROPEOLUM TRICOLORUM*

BY FLORA.

THE very graceful beauty of the above plant is such as amply to repay for any attention that can be bestowed upon it. Whether its neat and interesting foliage, or the striking gaudy flowers produced in such profusion be noticed, each have peculiarly attractive charms.

Very great difficulty, however, occurs in growing the plant successfully, which induces me to send the following remarks on the treatment which I have pursued, and which I have found to answer extremely well.

All plants having bulbous roots require a season of rest, this is requisite with the *Tricolorum*, the question with me was, when is the most suitable term for it; I concluded, when they appeared to cease pushing new shoots early in October, I then gradually withheld watering, and in the following month, I ceased to give any water at all. I retained the bulb in the dried soil, and kept it on a shelf in the greenhouse. Early in January I examined the bulb by removing a portion of soil from the side, and I perceived it was vegetating. I then took it up carefully and repotted it into a twenty-four sized pot, using the following compost,

VOL. VI. No. 66.

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one-third sandy peat, one-third well rotted leaf mould, and old hotbed dung, and the other part, a fresh yellow loam. I put two inches deep of drainage, viz. one of broken pots, and the other of moss.

I had the bulb placed high in the middle of the pot, and I replaced the plant in the greenhouse, and gave it water only when it was quite dry. This latter attention is very necessary, for the least excess of water rots the tender fibres, and consequently the foliage and stem dies. When, however, by any inattention, such a causality occurs, a friend of mine, who has long grown this plant, says, that the bulb should not have any more water, the surface stagnant soil to be removed, (not where the fibrous roots are), and a little dryish loam be substituted, the bulb ought then to be allowed to rest, just as if it was the usual season of its dormant state, at the end of the summer. Early in March, I put the pot in a gentle heat, in a hot bed frame for a fortnight, the bulb pushed a shoot, I then removed it to the greenhouse, where I carefully trained it to a circular wire frame, when the plant reached the height of six feet, and produced hundreds upon hundreds of its delightful blossoms. I am fully persuaded that the season of rest is by many persons prolonged too late in spring.

It is better to get the plant pushed by the end of March, and it can then be gradually encouraged by watering, &c. so as to become vigorous, and it should then be placed in a congenial situation in the greenhouse, where it is light and airy. When the bulb is kept dormant till April, as is generally done, a strong excitement is often had recourse to, by forcing the shoot up, and pushing it up afterwards very rapidly, in doing this, the roots are generally more tender, and the increased temperature renders an increase of water necessary; this often rots the fibres, and the plant either dies or becomes sickly. The greatest attention is required in the following particulars, viz. Have the bulb planted high, and excite the shoot up by placing the bulb a fortnight in gentle heat. Grow the plant in a light and airy greenhouse. Never water the soil till dry at surface, and dry it gradually for a season of rest; repot in the manner stated, and success is certain.

FLORA.

ARTICLE II.

ON THE CULTURE OF BOUVARDIA TRIPHYLLA.

BY MR. RICHARD DAY, ALVERTON GARDENS, BATH.

EARLY in April collect all the Bouvardias together from the place, where they have been kept through the dormant season, under the stage of the greenhouse. I turn them all out of their pots, and shake the soil completely from the roots; I thin off most of the large roots, yet retain as many of the fine fibrous ones as possible. Likewise at the same time, I cut down all the former year's shoots, retaining only two, three, or four eyes on each, according to the age and strength of the plants; I then plant them in pots, suitable to the size of the plants, taking great care never to overpot them, nor to cramp the roots by confinement. When potted, I water them to settle the earth about their roots, and place them in a cold frame, which is covered with mats at night, the lights being kept close during the night, and even in the day, unless the sun is very strong upon them, till they begin to grow; then give them portions of air, according to the day and their advance in growth. Subsequently I leave the lights off through the day, and lastly, do not put them on at night.

In about a week after they have been thus exposed, plant them finally out for the season, either in clumps by themselves, or distributed among other plants, when they are soon in fine bloom, and continue to flower till November, and are crowned with fine luxuriant clusters of splendid trumpet-like flowers.

As soon as frost is apprehended, I take up the plants with balls of earth attached to their roots, disturbing the fibres as little as possible, and place them carefully in pots that will admit of a little good mellow soil under the ball and around it.

When they are thus replaced in pots and watered so as to settle the mould, those which are in luxuriant bloom mix amongst the green house plants, where they make a splendid appearance till Christmas. When the plants begin to shed their leaves, and the flowers are nearly gone, I put them out of sight, under the stage as mentioned above, until April. This treatment I have continued with the same plants for many years; for the application of fresh soil, the trimming of the old roots, the great luxuriance gained by growing without confinement of their roots,

in congenial soil in summer, renovate the plants, which could not be done by any other means of culture.

Propagate the *Bouvardia*, by cuttings of the roots, which are managed as follows: fill some large pots with good fresh mellow loam, well blended with either thoroughly rotten dung or vegetable mould, and plant the roots all over the pot, beginning in a circle round the outside, opening the soil and planting them with the finger, continue to fill up one circle within another, till it is finished in the centre pot or pots, leaving no more of the roots visible above the surface than the top, when planted and watered, place them in a hothouse, where the temperature at night is kept at 70 degrees. As soon as the shoots get to between four and five inches high, I pot the plants singly into pots of a small size, and by degrees harden them after they have been established. When they have made some progress after this transplanting, I plant them out into a bed four feet wide, eight inches between the rows, and four inches in the row; where, if the soil be good, many of them will soon be in flower. They are then treated in the same manner, as directed for the older plants.

R. DAY.

ARTICLE III.

ON WATERING PLANTS.

BY CLERICUS.

THE present season of the year renders a good deal of watering necessary, and as the vigour and beauty of many plants is more or less the result of judicious or unjudicious watering. For several years I have used a good deal of liquid manure water with the greatest success, I am confident its advantages are not generally known, or it would be more generally used.

The mode of procedure I adopt is to water thrice with water in its natural state, and once with the manure water. This proportion is found to be congenial to the growth of all my greenhouse, stove, or half hardy plants, I have in pots; such as *Geraniums*, *Heaths*, *Salvias*, *Diosmas*, *Calceolarias*, *Cockscombs*, *Balsams*, *Justicias*, *Linums*, &c. &c. I find it most essential to

those kinds of plants which grow rapidly, and fill the pots full of roots; a supply of the manure water, renders it unnecessary for a long time to repot, and where a larger pot would be unsightly, I can keep a plant vigorous all the season without it.

To give manure water only, I find fills the soil with too much nutriment, and closing it up, renders it unsuitable to the health of the plants. I find that my using manure water, the surface soil of the pots requires to be stirred up a little oftener, but the vigour and beauty of the plants, more than compensate for this attention.

I have a tank made at the lowest part of my melon ground into which the drainings from the hot beds run.

CLERICUS.

June 6th, 1838.

ARTICLE IV.

ON THE CULTURE OF MANETTIA CORDATA AND M. GRANDIFLORA.

BY LOUISA HARRIETT.

THE above named pretty flowering plants well merit a place in every greenhouse or conservatory, and are very fine accompaniments to the *Tropæolum tricolorum*, *pentaphyllum*, *Brachyceras*, &c. Having most successfully grown them during the last two summers, I forward for insertion in the Cabinet, my mode of treatment.

The compost I use is a mixture of sandy peat, and well enriched loam, in equal proportions, having the pots well drained. I take care to have the plant raised high in the centre of the pot, so that no excess of water can be retained to damage it. This is essential to its flourishing.

A small plant of each was potted off early in March, I placed a circular wire trellis to each, and trained them to the height of five feet, and each plant produced a vast profusion of their handsome scarlet blossoms. Early in June I removed them out of the twenty-four sized pots into twelves, in which they flourished the remainder of the year, continuing to bloom till November, and no plants in my collection equalled them in beauty.

Manettias are of easy culture striking most freely from cuttings

and grow rapidly. I purchased my plants at 2s. and 6d. each. I cut them down when I repotted them the second spring, being informed that plants so treated grew much more vigorous, than if all the tops were retained, as in that case the shoots are always weakly and produce few flowers.

L. HARRIETT.

ARTICLE V.

REMARKS ON THE HOLLY.

FRENCH naturalists have made the Holly the emblem of foresight, because, they say, that the foresight of Nature is admirably exemplified by this beautiful tree, which, when growing in its natural forest, protects itself by numerous leaves bristling with thorns, till it rises to about the height of ten feet, when the leaves cease to be thorny, and are perfectly smooth and even, because it has no longer any occasion to arm itself against any enemy who cannot reach higher; but we revere the Holly branch with its spiny and highly varnished foliage, which reflects its coral berries as an emblem that foretells the festival of Christmas, and the season when English hospitality shines in roast beef, turkeys, and the national pudding.

Tradition says that the first Christian church in Britain was built with boughs; and the disciples adopted the plan, as more likely to attract the notice of the people, because the heathen built their temples in that manner, probably to imitate the temples of Saturn, which were always under the oak.

The great feast of Saturn was held in December; and as the oaks in this country were then without leaves, the priests obliged the people to bring in boughs and sprigs of evergreens; and Christians on the 25th of the same month did the like; from whence originated the present custom of placing Holly and other evergreens in our churches and houses, to show the feast of Christmas is arrived.

This tree appears to have been formerly called Hulver, by which name it is still known in Norfolk, and Holme, in the southern counties; as appears by the name it has given to many places, where it grows naturally, as the Holmwood between Hordsham and Dorking. Mr. Evelyn says, that the vale near his

house, in Surry, was anciently called Holmesdale. We presume, the name Holly is a corruption of the word holy, as Dr. Turner, our earliest writer on plants, calls it HOLY and HOLY-TREE; which appellation was given it, most probably, from its being used in holy places. It has a great variety of names in Germany, amongst which is *Christdorn*, in Danish it is also *Chirstorn*, and in Swedish *Christtorn*, amongst other appellations; from whence it appears, that it is considered a holy plant by certain classes in those countries.

The disciples of Zoroaster, believe, that the sun never shadows the Holly-tree. There are still some followers of this king of the magi to be found in the wilds of Persia, and some parts of India; who, when a child is born, throw in its face water which has been put in the bark of a Holly-tree.

Pliny tells us, that Tiburtus built the city of Tibur, near three Holly-trees, over which he had observed the flight of birds that the gods had fixed for its erection; and that the trees were standing in his own time, and must, therefore, have been upwards of one thousand two hundred years old. He also tells us, that there was a Holly-tree then growing near the Vatican, in Rome, on which was fixed a plate of brass, with an inscription engraven in Tuscan letters; that it was older than Rome itself, which must have been more than eight hundred years. This author notices a Holly-tree in Tusculum, the trunk of which measured thirty-five feet in circumference, and which sent out ten branches of such magnitude, that each might pass for a tree; he says, this single tree alone resembled a small wood.

The Holly grows to a considerable size, even as a timber tree, in this country, when permitted to stand. Cole tells us, in his "Paradise of Plants," that he knew a tree of this kind which grew in an orchard; and the owner, he says, "cut it down and caused it to be sawn into boards, and made himself a coffin thereof, and if I mistake not, left enough to make his wife one also. Both the parties were very corpulent; and, therefore, you may imagine the tree could not be small."

Bradley mentions that he has seen Holly-trees sixty feet high, at a place called Holly-walk, near Frensham, in Surry. Dr. Withering says, that on the north of the Wrekin, Shropshire, the Holly-trees, grow to a large size, and they are very common in the Chiltern division of Buckinghamshire. We have also ob-

served it growing abundantly in some parts of St. Leonard's forest in Sussex, particularly in the neighbourhood of Handcross. We presume that many noble trees of Holly would be seen in this country, but for the practice of cutting all the finest young plants to make coachmen's whips, thus leaving only the crooked branches or suckers to form shrubs.

The Holly, when it stands detached and is left to nature, forms one of the most beautiful evergreen trees that this or any other country produces; its pyramidal form, its immoveable foliage, its bright deep-green colour, and brilliant vermillion berries, contrast happily with almost every tree and shrub which the forest or the grove affords.

In the shrubbery these trees have a good effect, when judiciously placed; and although we prefer the common Holly in general, we recommend the variegated kinds as great enliveners to dark evergreens, as the yew, cypress, &c. They should have the box or some dwarf shrub in front, and a dark back-ground, whilst the common variety should be mixed with gayer neighbours; and the pale tints of the larch, which tower above its head, harmonize as well with this tree as does the waving birch or tremulous asp.

The variety with yellow berries was found wild near Walder Castle, as also at Wiston, near Buers, in Suffolk; it is a very ornamental tree in the shrubbery, as its berries at a distance carry the appearance of blossoms from the month of October to March.

Our nurserymen now offer us nearly fifty varieties of this plant, all of which may be propagated by grafting on a stock of the common sort. The most curious variety is that known by the name of the Hedgehog Holly, from its leaves being defended in all directions by thorns; this kind grows naturally in Canada; and Mr. Miller considered it a distinct species, and says it continues its natural character when raised from seeds. It was first planted in the Bishop of London's Garden, at Fullham, in the time of Compton, by Mr. George London, who is supposed to have introduced it from France. This ingenious nurseryman says, in his "Retired Gardener," 1706. "We have great variety of Hollies in England, and have brought them to more perfection than they are in any other part of the world."

(To be continued.)

ARTICLE VI.

ON THE CULTURE OF SCHIZANTHUS RETUSUS AND S. GRAHAMII.

BY FLORA.

IN the spring of last year I sowed seeds of the above *Schizanthus* in pots, and in May, I transplanted a number into my flower beds, they flourished and became very bushy, but did not at all throw up any flower stems. In October I took up the plants with all the soil adhering to each as I possibly could, and potted them into large pots, keeping each plant rather high in its pot. I did this, knowing they were likely to damp off, and being very bushy, I judged if the plant covered overclosely the top of the pot, the dampness from watering, would all be retained in the foliage, and certainly would cause it to rot. I placed the plants in a dry and airy part of the greenhouse during winter, and now, June 12th, they have pushed shoots a yard high, are still growing, and have hundreds of flowers upon each plant. One plant has eighteen erect principal stems, each furnished with laterals. Having been so successful, I have planted out some more from spring sown plants into the open border, for my next years' supply, where there is not the aid of a greenhouse, or even a pit frame to keep the plants in, during winter.

I am of opinion, if care be taken to pot high, and give none over the foliage in winter, they might be preserved in a dwelling room, having a tolerable aspected window for light. The beauty of the plant will amply repay for any unnecessary trouble.

Middlesex, June 13th, 1838,

FLORA.

ARTICLE VII.

REMARKS ON THE ROSE.

BY ROSA.

THE following very striking remarks on that lovely flower the Rose, I recently met with, and extract them for insertion in the Cabinet, the ardency with which the plant is now cultivated, and

Vol. VI. No. 66. s

the season of blooming alike, will justify my requesting their immediate insertion.

The rose which is the emblem of beauty and the pride of Flora, reigns queen of the flowers in every part of the globe; and the bards of all nations have sung its praises. Yet what poet has been able, or language sufficient, to do justice to a plant that has been denominated the daughter of heaven, the glory of the spring, and the ornament of the earth.

As it is the most common of all that compose the garland of Flora, so it is the most delightful. Every country boasts of it, and every beholder admires it; poets have celebrated its charms without exhausting its eulogiums, for its allurements increase upon a familiarity, and every fresh view presents new beauties, and gives additional delight. Hence it renovates the imagination of the bard, and the very name of the flower gives harmony to his numbers, as its odours give sweetness to the air.

To paint this universal emblem of delicate splendor in its own hues, the pencil should be dipped in the tints of Aurora, when arising amidst her aerial glory. Human art can neither colour nor describe so fair a flower. Venus herself finds a rival in the rose, whose beauty is composed of all that is exquisite and graceful.

It has been made the symbol of sentiments as opposite as various. Piety seized it to decorate her temples, whilst Love expressed its tenderness by wreaths, and Jollity, revelled adorned with crowns of roses. Grief strews it on the tomb and luxury spreads it on the couch. It is mingled with our tears, and spread in our gayest walks; in epitaphs it expresses youthful modesty and chastity, whilst in the songs of the Bacchanalians their god is compared to this flower. The beauty of the morning is allegorically represented by this flower, and Aurora is depicted strewing roses before the chariot of Phœbus.

“ When morning paints the orient skies,
Her fingers burn with roseate dyes.”

It is thought to have given name to the Holy Land, where Solomon sung its praise, as Syria appears to be derived from Suri, a delicate species of rose, for which that beautiful country has always been famous; and hence called Suristan, the land of Roses.

Forster says, "the rose of Kashmire for its brilliancy and delicacy of odour has long been proverbial in the East."

"Who has not heard of the vale of Cashmere,
With its roses the brightest that earth ever gave."

MOORE.

The oriental poetry abounds in flowery allusions to this plant.

"You may place a hundred handfuls of fragrant herbs and flowers before the nightingale, yet he wishes not in his constant heart, for more than the sweet breath of his beloved rose."

"Oh! sooner shall the rose of May
Mistake her own sweet nightingale,
And to some meaner minstrel's lay
Open her bosom's glowing veil."

MOORE.

The Ghebers say, that when Abraham, their great prophet was thrown into the fire by the order of Nimrod, the flame turned instantly into "a bed of roses, where the child sweetly reposed."

According to the heathen mythology, Pagoda Siri one of the wives of Wistnou, was found in a rose.

The island of Rhodes owes its name to the prodigious quantity of roses with which it abounds.

Ludivico Verthema, who travelled into the east in the year 1503, observes, that Taessa was particularly celebrated for roses, and that he saw a great quantity of these flowers at Calicut, both red, white, and yellow; and Sir William Ousely tells us, in his work on Persia, that when he entered the flower garden belonging to the governor of a castle near Fassa, he was overwhelmed with roses. In Persia, wine and other liquors are brought to table with a rose in the bottle, instead of a stopple or cork.

Jackson says, that the roses of the Jinan Nile, or the garden of the Nile, attached to the emperor of Morocco's palace, are unequalled, and that matrasses are made of their petals for the men of rank to recline upon; and we read in Father Catrou's "Histoire de Mogol," that the celebrated princess Nourmahal caused an entire canal to be filled with rose water, upon which she took her pleasure with the Great Mogul.

The heat of the sun disengaging the water from the essential oil of the rose, this substance was remarked floating on the surface of the canal; and it was thus that the otto of roses was first discovered.

A perfumer in Paris who made otto of Roses for the court of Louis the Sixteenth, says, that it required four thousand pounds weight of rose leaves to produce seventeen ounces of the oil.

Of the birth of the rose, it is related in fable, that Flora having found the corpse of a favourite nymph, whose beauty of person was only surpassed by the purity of her heart and chastity of mind, resolved to raise a plant from the precious remains of this daughter of the dryads, for which purpose she begged the assistance of Venus and the Graces, as well as all the deities that preside over gardens, to assist in the transformation of the nymph into a flower, that was to be by them proclaimed queen of all the vegetable beauties. The ceremony was attended by the Zephyrs, who cleared the atmosphere, in order that Apollo might bless the new created progeny with his beams. Bacchus supplied rivers of nectar to nourish it, and Vertumnus poured his choicest perfumes over the plant. When the metamorphosis was complete, Pomona strewed her fruit over the young branches, which were then crowned by Flora with a diadem, that had been purposely prepared by the celestials to distinguish this queen of flowers.

Anacreon's birth of the rose stands thus translated by Moore :

" Oh! whence could such a plant have sprung ?

Attend—for thus the tale is sung :

When, humid from the silvery stream,

Venus appear'd, in flushing hues,

Mellow'd by Ocean's briny dews—

When, in the starry courts above,

The pregnant brain of mighty Jove

Disclosed the nymph of azure glance—

The nymph who shakes the martial lance .

Then, then, in strange eventful hour,

The earth produced an infant flower,

Which sprang, with blushing tinctures drest,

And wanton'd o'er its parent's breast.

The gods beheld this brilliant birth,

And hail'd the rose—the hoon of earth !

With nectar drops, a ruby tide,

The sweetly orient buds they dyed,

And bade them bloom, the flowers divine

Of him who sheds the teeming vine :

And bade them on the spangled thorn

Expand their bosoms to the morn."

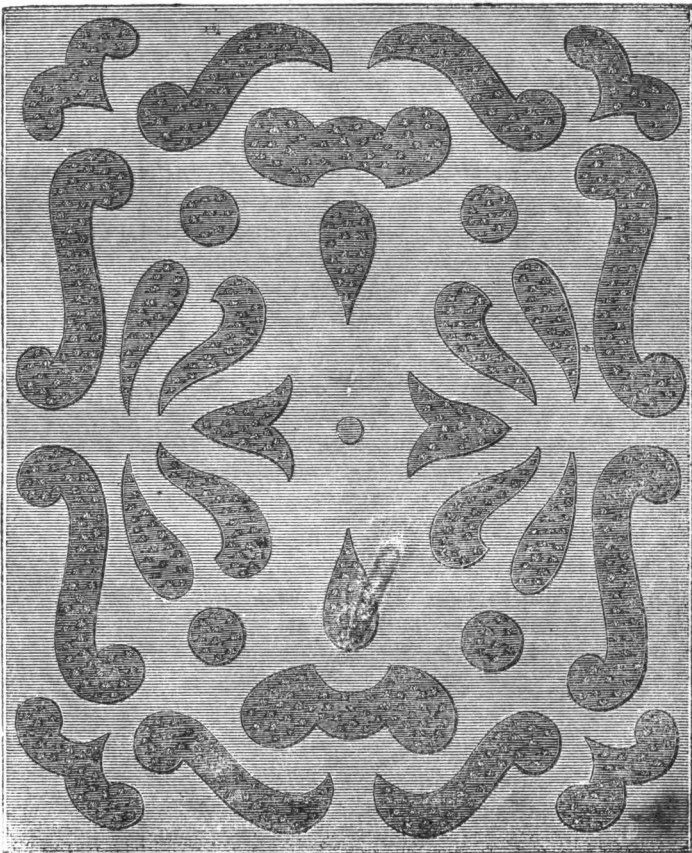
(To be continued.)

ARTICLE VIII.

PLANS OF A FLOWER GARDEN,

- THE two following Plans of a Flower Garden, have been got up at a considerable expense, being of the very best description of wood-engraving, and executed by one of the first artists, their insertion, we hope, will be acceptable to our subscribers.

PLAN I.



We are aware that many of our readers feel much interest in the ornamental arrangement of plants, so as to perpetuate to the latest period a display of such flowers as are most calculated to prolong the interesting scenery of a Flower Garden. We shall feel much obliged, if some of our correspondents would kindly furnish us with a list of such plants as are best calculated for ornamenting of gardens on similar plans to the accompanying drawings.

PLAN II.



REVIEW.

(Continued from page 162.)

A north wall of moderate extent and moderate elevation, is often desirable, as affording space for ornamental climbers, and half acclimatized exotics, and as forming a *point d'appui* for the conservatory and other botanical structures. Such a wall may be surmounted with urns and other architectural ornaments, and screened at some little distance behind by trees. The other fences may be of wire-work, generally called *invisible*, or of wooden rails, or of holly hedges with rails.

Formerly the flower-beds were made either circular, straight, or in curves, and were turned into knots, scrolls, volutes, and other compartments; and this taste prevailed, perhaps, in some measure from a desire on the part of the contrivers, to compensate by their ingenuity for the paucity of the ornamental plants which they then cultivated. Now that the riches of Flora have poured into our gardens, a simpler taste has obtained. Of the figures in fashion at present in the lawn flower garden, perhaps the kidney shape and its varieties occur too frequently. It is needless as well as impossible to specify the numerous configurations of flower-pots, for they abound in kaleidoscopic variety. Good taste will suggest that those only should be associated, which harmonize well together; and it is better to incur the hazard of an apparent monotony, than to excite wonder by incongruous combination. When the figures are separated by turf, it is necessary that the little lawns or glades should have a considerable degree of breadth, as nothing has a worse effect than over-crowding. A multitude of little figures should also be avoided, as they produce what Mr. Gilpin calls *spotiness*, and which, as he has correctly pointed out, is a grievous deformity. In this sort of flower garden, it is desirable that a gravel walk should skirt along at least one side of the principal figures; in our humid climate, the grass would otherwise render them inaccessible with comfort during a great part of the year. In those gardens from which turf is excluded, the compartments should be of a larger and more massive character. Narrow borders bounded by parallel straight lines and concentric curves, should be avoided. The centres of the figures should be occupied with tall-growing shrubs, and even with an occasional low evergreen tree, such as a yew or a holly. The walks arranged in long concave curves, may communicate here and there with one another. A dial, a few seats and arbours, with an urn or two or a vase, may be introduced with good effect. It is to be regretted that so few good specimens of this species of flower-garden have hitherto been executed in Britain.

Amongst the accompaniments of the flower-garden may be mentioned the rock-work. This consists of variously grouped masses of large stones, generally such as are remarkable for being figured by water-wearing, or for containing petrifications or impressions; and into the cavities between the stones, filled with earth, alpine, or trailing plants are inserted. These are numerous and may be endlessly diversified. Several species of *Helianthemum*, *Gentiana*, *Pentstemon*, and *Primula*; *Campanula pumilla*, blue and white varieties, *carpatica*, and *nitida*; *Saponaria ocymoides*, and *Adonis vernalis*, may be recommended. In proper situations, a small piece of water may be introduced for the culture of aquatic plants. One of the walks is sometimes arched over with wire-work, and covered with ornamental climbing shrubs, forming a delightful promenade in the glowing days of summer. A separate compartment, generally of some regular figure, is set apart for roses. A moist, or rather a shady border with bog earth, is devoted to that class of shrubs, commonly but not very accurately designated,

"American plants." In extensive places, a separate "American garden" is often formed in a locality which if not damp, has at least the command of water, occupying generally some warm corner of the park.

Some writers have advocated the formation of winter and spring gardens in separate localities; but we are not aware that their ideas have ever been embodied to any great extent. It is proposed that in the winter garden should be assembled all the hardy evergreen shrubs and plants, together with the few flowers that bloom during the winter months. The situation, it is recommended, should be well sheltered, and open only to the warm rays of the sun, which are peculiarly grateful in our cold brumal seasons. However attractive this scheme may be in theory, it seems doubtful whether it would be very successful in execution. Masses of evergreens have a sombre and monotoneous effect, even in winter, unless occasionally broken and varied by deciduous trees. The contrast of their leafless neighbours relieves the intenseness of their gloom, and sets off their brilliancy. Though a winter garden, the very name of which is chilling, is perhaps not very desirable by itself, the object to be attained in it should be kept in view in the formation of the park or flower garden. We can easily suppose a particular section of the latter to contain a predominance of evergreens, and to possess the principal characters of a winter garden, without the formality of its name and purpose. In the endless variety of situations, it is not difficult to imagine a sloping bank, for instance, facing the sun, with a long walk skirting its base, the lower side of which might be adorned with a border or narrow paterre planted with arbutus and periwinkle, whilst the slope is covered with the higher evergreens, and the summit of the acclivity is crowned with groups of deciduous trees, interrupted by a few straggling firs, through which the wind, unfelt below, might sigh its melancholy music. Again, the spring garden, which need not be of very great extent, may take refuge in the vicinity of the green-house or conservatory, with which it is naturally allied.

Soil.

A variety of soils is required in the flower-garden, to suit the very different kinds of plants that fall to be cultivated. To florists' flowers particular compounds are assigned, and these shall be mentioned when treating of the flowers themselves. American plants require a peaty earth, varying from boggy peat to almost pure sand. Alluvial peat, that is boggy earth which has been washed away and incorporated with white sand, it is to be preferred; peat, cut from its natural bed and only partially decomposed, is of no value at all, or it is positively prejudicial to plants. In collecting soil from the surface of the muir, it is proper to take no more than the upper turf or sod, with the peat adhering to it, and only from the driest parts of the muir, where, besides the common heath, fescue-grasses occur. Where this cannot be procured, a good substitute is found in vegetable mould, that is, decayed leaves swept from lawns or woods, and allowed to lie in heaps for a few years. For the general purposes of the flower-garden a light loamy soil is advantageous; and were the natural covering is thin, or requires making up, recourse should be had to the surface-earth of old pastures, which, especially when incumbent on trap rocks, is found to be excellent. It is expedient to have a large mass of this material in the compost yard. The turf, and the surface soil adhering to it, should be laid up in a rough state, in which way it is continually ameliorating, by the decomposition of the vegetable matters, and the action of the air.

(To be Continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. ANIGOZANTHUS FLAVIDA. *Yellow haired.* [Bot. Reg. 37.

HEMEDORACE. HEXANDRIA MONOGYNIA.

This plant was long ago introduced into this country from New Holland, but it is to be found only in a few collections. Recently it has been sent from the Swan River colony to R. Mangles, Esq. Sunning Hill, Berks. If cultivated in the open border during summer; it grows very vigorously and blooms freely, a rich loamy soil mixed with about one-fourth of sandy peat suit it best. When grown in a pot in the frame-house, it requires plenty of room, to be placed near the glass, and have a free supply of water. The flowers are green in their early stage, changing to a yellowish green, when advanced. The outside of the flower is very hairy.

2. CENTAUREA DEPRESSA. *Prostrate.* [Bot. Mag. 3662.

COMPOSITÆ. SYNGENESIA FRUSTANEA.

The flowers of this species are very like the blue corn bottle of our own fields, but are of a much brighter colour. The plant is of a more humble growth, growing about nine inches high. When in bloom, the size of the flowers, the splendid colour and profusion of them upon a plant so small, has a very pretty effect, and highly ornamental to the flower garden. The present species is annual, a native of Persia, but succeeds well in the open border in this country.

3. EPIDENDRUM VIRIDI-PURPUREUM. *Purplish green flowered.*
[Bot. Mag. 3666.

Imported from Jamaica by Mr. Horsfall of Liverpool, and has bloomed in the Glasgow Botanic Garden. The flower stem rises to about half a yard high, and produces a drooping dense raceme of flowers, each about three quarters of an inch across. The sepals are of a pale green tinged with brown. The column green tinged with purple.

4. IPOMEA BONARIENSIS. *Buenos Ayres Ipomea.* [Bot. Reg. 3665.

CONVOLVULACEÆ. PENTANDRIA MONOGYNIA.

Mr. Tweedie observes that this species grows plentifully on ditch banks about Buenos Ayres, and seeds of it were sent by him to this country. The plant has a large tuberous root. It requires to be grown in the stove, where it produces flowers freely, very much resembling those of *I. insignis*; they are very handsome, of a pretty lilac colour, having the inside of the tubular portion of a dark purple. The plant merits a place in every stove as a twiner, growing to a great extent if required, and blooming profusely. Each flower is about two inches across.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE CULTURE OF PELARGONIUMS.—A few remarks on Pelargoniums are requested in the August number not later.

July 16th.

A YOUNG GENTLEMAN.

The query came after our original communications were printed off, we however give the practice of the most eminent growers around London. As soon as the old plants have done blooming, say, by the end of June at latest; cuttings are taken off, cutting each clean, horizontally, close under a joint, dressing off any leaves as far up as the cutting is to be inserted in a mixture of sand and loam, equal parts. These are struck on a slight hot-bed, from hot sun; in a month they strike root, and are then potted into 60's, in a compost of sandy loam and peat, or vegetable mould, then shading for a few days in a frame till struck afresh, when they are exposed to the open air. By the middle or end of August, they are repotted and the top of each plant is cut off, to cause a production of laterals which get pushed a few inches before winter, to furnish blooms next year. This latter attention is essential to have them bloom fine. By the early part of October the plants are all housed, and kept in rather a dry state through winter. In February following or early in March, the plants are repotted into a very rich loamy soil using a good degree of drainage, a free supply of water is given through the following season. When the young shoots have pushed, if too many, they are stemmed out in April, and a few left to bloom vigorously. Such plants are cut down in September, re-potted, &c., as stated is done to the above. We will however give an article more in detail in another number.—CONDUCTOR.

ON BENTHAMIA TRAGIFERA, (OR CORNUS CAPITATA).—An Old Subscriber to Harrison's Floricultural Cabinet, requests to be informed of the best mode to bring the Benthamia Tragifera plant to flower and fruit. The writer of this has three good sized plants of four or five years growth, and in a good healthy state, but have never flowered. For the last two winters they were kept in large pots and housed.

Bath, June 4th, 1838.

We hope our respected correspondent, who sent us the fruit in the first instance from Cornwall, will favor us with the mode of treatment which had been produced so as to have a plant fourteen or more feet high, and proportionably bushy. We had a plant at Downham, Norfolk, planted in the open ground last July, which remained out in a very exposed situation during the last winter; the branches and upper part of the stem were destroyed by the frost, but the lower part of the stem survived and is now pushing forth shoots. If the precaution of protecting the plant by matting, or even the stem wrapped up with straw bandage, &c., we are of opinion that only the lateral branches would have suffered.

If the plant was trained against a good aspected wall, it would unquestionably flourish there and bear fruit. It might then be readily protected in winter. From the statement made by a person who saw the original plant in Cornwall: scarcely any plant is more interesting, when it is seen loaded with fruit.—CONDUCTOR.

ON PLANTS SUITED TO A GRAVEL SOIL, AND WHAT KIND OF PLANTS ARE BEST ADAPTED FOR FLOURISHING UNDER THE SHADE OF LARGE TREES.—Your usual kind attention to Young Amateurs emboldens me to put a question to you, and I shall be very much obliged indeed if you will assist me by an answer.

What plants whether annual, biennial, or perennial will be best for me to plant in a very dry gravelly soil, which composes my garden. It does not seem to contain anything unfriendly to vegetation, as trees extend their roots and flourish in it. I particularly wish to make it ornamental by a variety of flowers during several months in the year, especially to train creepers up the front of my house. As I am asking questions you will perhaps allow me farther to enquire, what is the best method of filling up and ornamenting a garden under a growth of tall trees, and what are the plants, shrubs, or flowers, or foliage, native, or exotic, hardy, or half hardy, which may most be relied on for growth in such situations, whether damp or dry, and especially in a gravelly soil.

A CONSTANT SUBSCRIBER AND AMATEUR.

July, 4th, 1838.

REMARKS.

ON THE CULTURE OF CHORIZEMA OVATA.—That our collections may no longer want the exquisite richness of the blossoms of this plant, under good management, we shall proceed to lay down our method of cultivation, as practised at Chatsworth. Like many other New Holland plants, we find it a matter of difficulty to grow this species to a good natural size, and at the same time handsome.

The majority of the plants, from some cause, not clear to us, either draw up very weakly, or what is worse, scarcely progress at all. The following are the probable causes which work against its successful cultivation. First, being placed at too great a distance from the glass, which always tends to draw them up weakly, the atmosphere being too close and damp is the sure consequence of the want of a free circulation of air or want of light. Secondly, improper soil, careless potting, or incautious watering. By keeping these matters in view, and carefully refusing to practise either, we have succeeded in growing plants of this description to a degree of excellency far surpassing our expectations.

The soil in general recommended is an equal mixture of very sandy peat and loam; this composition, for plants like those we are now speaking of, does not fully accord with our experience; the soil used here will, therefore be found to differ. We select a quantity of peat, carefully avoiding such as does not contain a good deal of fibre, or that has not a considerable portion of white sand equally mixed with it, rejecting as entirely worthless all such as inclines to be stiff, or very sandy: to this is added not more than one-fourth of mellow sandy loam; the whole is then examined, and if the grains of sand are found not to touch, or nearly so, throughout the whole, so as to give it a greyish cast, what more sand is thought sufficient is thrown in and properly mixed up.

The soil is never sifted, this practise is discarded as taking out the most essential part, namely, the fibre; but after being well broken up with the back and edge of the spade, what lumps remains too large are reduced with

the hands. Any soil naturally retentive, or that inclines to become close, is always objectionable for these, and, in short, all hair-rooted plants. Plants on their first removal after striking are put into 60 sized pots in the above soil, being very particular in putting no less than two inches of good drainage (pots herds) at the bottom of each; they are afterwards removed to the propagating house, being first gently watered with a fine rose; here the atmosphere is congenial to them in this state, and will consequently cause the roots to push, and prepare them for a removal into an atmosphere more suited to their constitution, which should take place in about a week, as the young shoots will have taken hold of the new soil.

The next situation sought for them is a pit or frame (any aspect, where they can be placed near the glass, and be shaded from the hot sun: during fine weather air should be admitted freely, and the plants carefully though sufficiently watered every evening. They are finally placed in the greenhouse as near the glass as possible; but if avoidable never place them opposite the ventilator when the air is admitted, this will prove injurious to them as the house will require to be freely ventilated; if the air is admitted from the roof, they cannot sustain any injury. The house should be shut up in the evening. As these plants suffer from over-potting, it is necessary here to caution against so dangerous a practice.

Potting is in general looked upon as of minor importance, but the truth is, a badly potted plant, however healthy when shifted, never thrives. It is instructive to turn out the balls of several recently potted plants, and observe where the soil is loose or in holes, how it affects their growth; where the soil is compact, and properly put about the roots, the plant will grow freely and root well; but, on the other hand, if the soil is put in loose, or left in holes, the plant never properly thrives, but languishes, and ultimately dies if allowed to remain in that state; it is therefore necessary to place the soil compactly and properly about the roots when potting, never forgetting to effectually drain every pot as before directed.

The propagation of these plants is a difficulty which every gardener acknowledges and experiences, but even this becomes comparatively easy when steadily and attentively followed up. The few following hints will be useful.

The cuttings should be taken off while the wood is young, and carefully prepared; take off the bottom leaves with a sharp knife, and make a clear cut just through the joint; the cutting pot should be drained and filled to within two inches of the top, with the soil before spoken of, on the top of this put a layer of clean white sand, into which plant the cuttings, making a little hole for their reception with a small prepared stick; when the pot is full, give them a steady watering with a fine rose; after which, place a clean glass over them. In this state they may be removed to the propagating house, where the temperature should not sink below sixty-five degrees, and plunged into a little saw-dust. They should be effectually shaded from the sun, which can easily be done by placing a sheet of coarse paper between it and the glass inside the houses not as usual on the roof outside. The glass should be wiped quite dry every morning, and the cuttings when necessary, carefully watered.

The object of filling the pot up to within two inches of the top with soil, is to enable the young roots, as soon as they are formed at the bottom of the cuttings, to take off at once into the soil, which greatly strengthens them, and prevents the check which would ensue when potted off, if allowed to form their roots wholly in the sand.

Seeds of many of the species ripen in abundance, and as they in general vegetate freely, plants may be readily increased from them. They may be sown in any light soil, carefully avoiding any among which dung is incorporated; placed in a gentle heat, securely shaded from the sun, and judiciously watered, they will come up well; and when four proper leaves are formed they may be potted off in the manner before directed for cuttings.

MAGAZINE OF BOTANY.

REFERENCE TO PLATE.

1. *STANHOPEA OCULATA*, Eyed Stanhopea. Gynandria, Monandria. Orchideæ.—This most extraordinary species of an eminently remarkable genera of plants was originally imported by Messrs. Loddiges from Brazil, but is also reported to be a native of Mexico, as specimens were previously gathered there by Count Karwinski, and are preserved in the Royal Herbarium of Munich. It is very readily cultivated by the same treatment afforded to other Orchideæ natives of tropical climes. Practical details upon which our readers will find in several previous numbers of the *CABINET*; the form and marking presented to the eye by the flowers of this tribe of plants, are at once peculiarly attractive and striking, such is in a high degree conspicuously so with our present species, and must naturally awaken in the mind of every beholder the combined elegance and exquisite skill displayed in this one amongst the innumerable delightful works of our ever benevolent Creator.

2. *CHORIZEMA CORDATA*, Heart shaped Chorizema. Decandria, Monogynia, Papilionaceæ.—For the introduction of this new and beautiful species of Chorizema we are indebted to Robert Mangles, Esq., of Sunning Hill, Berks, who received it from the Swan River colony. It grows freely and is readily propagated by cuttings; it possesses fine foliage, of which other species are generally deficient, and blooms abundantly. It merits a place in every greenhouse or conservatory.

3. *MIMULUS HARRISONIA*, Harrison's Monkey flower. Didynamia, Angiospermia, Scrophularinæ.—This variety was raised, we are informed, by Mr. Low, of the Clapton Nursery. It is hybrid between *M. Cardinalis*, and *M. Roseus*; it is by far the most beautiful of the tribe, and besides the beauty of the flowers, it has the fine musk scent of *M. Moschatus*. With us it grows near four feet high, making quite a vigorous branching plant, and blooms profusely. The plant does well either in the open border, or in a pot.

FLORICULTURAL CALENDAR FOR AUGUST.

PELARGONIUMS.—Those plants that have done blooming should now be cut down, this will induce them to push fresh shoots immediately; when the shoots have pushed two inches long, the old plants should be repotted, shaking off the old soil and replacing with new. This attention to have a supply of strong young shoots before winter, furnishes the vigorous blooming wood for the ensuing spring, and the plants are kept dwarf and bushy. When the young shoots push after being headed down, there are generally many more than necessary to be retained.

They should be thinned out when an inch long: the tops now cut off may be inserted in sandy loam, and struck if required.

GREENHOUSE.—All exotic trees and shrubs belonging to this department, that are in want of larger pots, or refreshment of new soil, should (if not performed last month) immediately be done. This is the proper time to propagate Aloes, Sedums, and all others of a succulent nature, by means of suckers or bottom offsets; when detached from the parent, they should be potted singly into small pots, using light dry compost, watering sparingly till they have taken root. In the first, or second week at farthest, inoculation may be performed on any kinds of the Citrus genus.

DAHLIAS.—Thin out the branches of those kinds which are introduced for shows, and if it is desired to increase the stock of any new one, cuttings may be selected which will readily strike and form good sized pot-roots; water should be given copiously every evening, during dry weather; a strata of manure should be laid for three feet around the stem of each plant, which

will greatly assist in promoting a vigorous growth, and in the production of fine blooms during the ensuing month.

Earwigs and other insects begin now to infest the plants, and especial care should be taken to destroy them as much as possible before the plants get into bloom, which may be done by placing an inverted small garden pot, in which is placed a little moss; upon each stake, to which the earwigs will resort, and may be taken every morning.

AURICULAS.—Seedlings raised during spring should now be transplanted into pots for blooming.

CARNATIONS.—The blooms are now beginning to fade, and the operation of laying should be performed without delay; in doing this, take your seat astride a common form, get the pot before you, and steady the layers with your left hand, resting the back of your right hand upon the edge of the pot and holding the knife upwards between your two fore fingers and thumb; then, with a steady hand and correct eye, cut upwards quite through the middle of the second or third joint from the top; the cut may be extended a full quarter of an inch beyond the joints; if the joints are wide apart always take the second; remove the leaves that ensheath the joints, and shorten the nib just below them; be careful not to break off the layers in pegging them down, and cover the joints three quarters of an inch deep; remove them into the shade, water them with a fine rosed pot, and repeat it afterwards as often as necessary.

RANUNCULUSES.—roots should now be taken up and gradually and well dried in an airy room.

ROSES.—Budding should be finished as soon as possible.

CAMELLIAS.—any kinds required to bloom early, should now be removed into the greenhouse.

Mignonette to bloom during winter, should now be sown in pots.

FLOWER GARDEN.—Due care must be taken respecting watering any kinds of annual, biennial, or perennial plants that may be in pots. Propagate by means of slips, and parting the roots of any double-flowered and other desirable fibrous-rooted perennial plants done flowering. Likewise increase by offsets the different kinds of Saxifrage. Auriculas should be cleared of all dead leaves, and shifted into fresh pots; prick out of the seed bed, where it was omitted last month, Seedling Auriculas and Polyanthuses, in a shady situation: seeds may also be sown of both kinds in boxes or pans. Carnations may still be layered, also Sweet-williams if desired, the earlier in the month the better. Those which were layered four or five weeks ago, will now be sufficiently rooted to be taken away, or planted in beds or pots. Also plant out pink pipings, which were put in in June. Sow seeds of all kinds of bulbous rooted plants in pans or boxes, such as Spring Cyclamen, Anemonies, Ranunculuses, &c., &c. Those kind of bulbs wanted to increase should be taken up if the leaves be decayed, and the offsets taken off. Crocus's, Narcissus's Crown Imperial, and Lilies, should only be taken up every other year. In dry weather gather those flower seeds that are ripe of any desired kinds. Plant out such kinds of autumn flowering bulbs as yet remain unplanted. Heartsease towards the end of the month, should be propagated by slips, put into a shady border, and kept quite moist till they have taken root; these will form fine strong plants for blooming the spring following. Chrysanthemums should not have their shoots stopped to make them branch, and keep them bushy, later than the middle of this month, as, if done later, the lateral produce would be weak and the blossoms small.

Where the plant has numerous shoots, they should be thinned out to a few, to have the plants large and showy.



N^o 1.



N^o 2.



N^o 3.

THE
FLORICULTURAL CABINET,

SEPTEMBER, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON LOBELIAS FOR FORMING A BED IN THE FLOWER GARDEN.

BY CLERICUS.

THE *Lobelia Cardinalis* and *L. fulgens* have already been noticed in the Cabinet, and as they most deservedly merited, were strongly recommended as highly ornamental plants for the flower garden; the fine brilliant scarlet colour of the former, and the bright crimson of the latter, not being exceeded by any other flower. I am much pleased with the meritorious results of hybridising some of the species of *Lobelias*, and to find among the produce some peculiarly striking varieties. I procured all I could, (a list I annex below) early this spring, and have planted them in a bed in my flower garden, and they now form one of the most interesting and handsome ornaments the flower garden can boast of.

I planted the tallest kind, *L. cardinalis*, now three feet high, in the centre of a circular bed, a row of *L. fulgens* next, and then six rows of the mixtures in colour, consisting of one hundred and twenty-five plants, to complete the bed, with the exception of the outer row, which consists of *L. arguta* and *L. gracilis* alternately planted, these latter being prostrate kinds and of a pretty blue and white, make a delightful edging.

The soil I have planted them in is a good fresh loam, well en-

riched with one year's old rotten dung from the cow yard, and a portion of sandy peat intermixed. In this compost, with a free supply of water, which is indispensable to their growing vigorously, I find them thrive amazingly. They now form a cone of brilliancy and beauty unrivalled, and which will continue to the end of the summer. I cannot too strongly recommend the culture of this lovely tribe to every reader of the Cabinet.

CLERICUS.

List of kinds which my bed contains, viz.

Lobelia densa, close flowered.

- *purpurea*, purple.
- *atropurpurea*, dark purple.
- *purpurea splendens*, very bright purple.
- *serotina*, glittering blue.
- *atrosanguinea*, deep blood-coloured.
- *rosea*, rosy crimson.
- *atro rosea*, deep rosy crimson.
- *grandis*, dark.
- *longifolia*, long-leaved lilac purple.
- *violacea*, violet coloured.
- *dentata*, purple crimson.
- *coccinea*, scarlet.
- *cælestis*, sky blue.
- *millerii*, (not yet in bloom)
- *propingua*, splendid scarlet.
- *azurea*, deep blue.
- *speciosissima*, showy.
- *siphilitica alba*, white.
- *siphilitica azurea*, deep blue, shaded.
- *altoatouriensis*, shaded crimson.
- *heterophylla*, various leaved, rich blue.
- *cardinalis*, scarlet.
- *fulgens*, crimson.
- *speciosa*, pale purple.

(We join our correspondent in commendation of this lovely tribe of plants. Their peculiarly graceful mode of blooming, elegance of form in so many successive spikes of brilliant flowers, their long duration of flowering, easy mode of culture, and the

facility with which the kinds may be increased and kept, all combining to give them claims to be admitted into every flower garden, or as highly ornamental to the greenhouse or conservatory, in summer, when grown in pots. The kinds may be forwarded at a cheap rate, and when once obtained, an abundance may be kept in future. Each of the kinds are prolific in offsets, and such being taken off the old plants in autumn, and potted into small pots in a sandy soil, and be kept in a cool frame, cool room or greenhouse through winter, or taking up the old plants at the end of the blooming season entire, putting each into a large pot, and preserving as above stated, throughout winter, the offsets will be numerous, and strong, and may be potted and separated, &c. in March, and by being forwarded a little, will be the better for turning out the end of April or early in May. We prefer leaving the offsets to the mother plant till spring, for when taken off late in autumn, not having an opportunity of striking root before winter, often perish. In either case, the plants require very little water during the winter season.—CONDUCTOR.)

ARTICLE II.

ON LAYING CARNATIONS, &c.

BY FLORA.

I LIKE Mr. Slater's article on the Tulip, very well, the hints of Practical Florists are always valuable. Your correspondent Pomona has laid down minutely the operation of laying Carnations, but there is one part of his system which is decidedly bad, I mean the old, (and I had hoped the exploded) method of cutting through the joint and one half or three quarters of an inch above it; the reason he gives for this is, like the celebrated question of King Charles to the Royal Society, founded upon a position that does not exist. It assumes if the slit was not made, the shoot would grow as nothing of the kind had happened. Now this from seven years experience I know to be false; the layers root equally well without the slit, and the plants are much more hardy, being in fact the same as a piping. The incision should reach up to the joint, but not into it, and be cut off close to it, as should the other side when taken from the mother plant. I never saw the difference more fully exemplified than in the late unfavourable winter and spring. Of my own plants layered in the above manner I lost not above one in fifty, whilst of those I received from different

places which were layered in the slit manner, nearly one-fourth have been destroyed. Perhaps Pomona will say he has Mr. Hogg's authority for his method, if so, I acknowledge it to be true, and I consider Mr. Hogg the first authority in the kingdom, but I am convinced that if he was to try the other method, (so far is he from being the slave of a system) that he would have no hesitation in adopting it. I do not expect that old practitioners will generally adopt the plan, but I would have all young florists abhor the slit system as much as they abhor a wire worm or earwig.—From my Hole in the Wall.

HUMBLE BEE.

ARTICLE III.

ROSES PROPAGATED BY CUTTINGS OF THE ROOTS

BY CLERICUS.

HAVING been advised to try the experiment of raising Rose trees by taking cuttings off the roots, I did so, and found it to succeed admirably. The mode I adopted was as follows. The first week in March I took some of the long, thick, and fleshy looking roots of my English and French Roses, and cut them into pieces about three inches long. I then smoothened the surface of a border in front of a peach wall, upon this I laid the roots flat, at about six inches apart; when the roots were placed, I covered them with fine sifted soil half an inch deep, gently beating it to the cuttings; I then laid four inches more of loamy soil well enriched with rotten cow dung, a year old, giving the whole a good watering, and when dry, smoothened the surface over with the back of the spade. By the middle of May every cutting had sent one, and some two strong shoots, and on examination, I found the soil I had covered the cuttings with, to be filled with a mass of fine roots; at this time, July 5th, the shoots are more than a foot high.

I have anxiously watered the bed, being in a sunny situation I found it got dry, more especially so, having the bed raised upon the old surface of the border, it would have been better to have sunk it so as finally to have it even with the surrounding soil.

FLORA.

(We have practised the above mode of raising Moss Roses, and

similar border kinds, which have been found difficult to increase from cuttings of the wood or young shoots, and have never known it fail. The following February is the best time to take up the young plants, and remove them to beds for flowering, which they will do very freely if taken up with as many fibrous roots as possible. Well rotted cow dung is the best manure for the rose, being cooler than horse dung, &c. a portion of it laid over the roots of the plants early in March, and either just pointed in or covered over with a little fresh loam, which improves the vigour of the plants and increase of bloom.—CONDUCTOR.)

ARTICLE IV.

ON MESEMBRYANTHEMUMS GROWN IN THE OPEN BED OR ON ROCK WORK.

BY LAURA.

THIS very extensive family of plants, furnishes a considerable quantity of very great beauty. The neatness in form, splendour of colour, and the profusion of blossoms, alike contributing to give them interest. In no situation do they appear to greater advantage than on a rock work, which has an open aspect to the sun from nine o'clock in the morning to four in the afternoon, Plants turned out of pots towards the end of May in various situations, so as to intermix the colours to the greatest contrast, and where they will give most effect, selecting trailing species where such are required, to hang down the face of a piece of rock, and upright growing kinds to rise out of hollows. Selections suitable are readily obtained at a cheap rate of nurserymen, who will give the best kinds both with regard to habit and colour for the purpose for which they are required.

The soil which I have found them to flourish best in, is loam, well enriched with old dung, with near one-sixth of sand; this allows water to pass readily away from the roots, and is essential to their success, for when the soil is close, and becomes soddened around the roots, the plants always become sickly. A free supply of water is also necessary, when they are growing and blooming; plants turned out in spring will continue to bloom till frost sets in. An open aspect to the sun is indispensable to their blooming and the flowers expanding.

In addition to furnishing a rock work, I had a bed made in front

of a greenhouse, close to the building, I had the old soil dug out a foot deep, at the bottom, I laid four inches of broken potsherds in large pieces, and filled up the space with a compost as above stated; in this I planted out sixty plants, the latter kinds at the back, sloping to the walk, running parallel with the front of the bed, and they bloomed prodigiously from the first week in June till November, when I had them taken up and repotted. I also repotted those on the rock work, kept them in the greenhouse, and turned them out again in the spring. During the mild winters of 1835 and 1836, I tried to keep those on the rock work alive, but was unsuccessful.

Bristol, July 7th 1838.

LAURA.

ARTICLE V.

REMARKS ON THE HOLLY.

(Continued from page 176.)

“AMONGST the kinds of holly which we noticed in the *Jardin des Plantes* at Paris, we were most pleased with a variety, with a very small pointed leaf, named *Aquifolium serratum*, and a second with a very broad leaf, quite free from spines, which was called *Ilex balearica*.

Columella seems to have recommended the Holly to the Romans as a proper fence for gardens. In his tenth book he says,

“And let such grounds with walls or prickly hedge,
Thick set, surrounded be, and well secured;
Not pervious to the cattle, nor the thief.”

Evelyn tells us that his garden at Say's Court was surrounded with an impregnable hedge of about four hundred feet in length, nine feet high, and five in diameter; “It mocks,” says this worthy author, “the rudest assaults of the weather, beasts, or hedge-breakers;” and it was almost the only thing belonging to his garden, that was not destroyed by the Czar of Muscovy. Mr. Evelyn lent his house to Peter the Great, in order that he might be near the dock-yard at Deptford, during his stay in England; and we are told that this imperial shipwright was so fond of being driven in a wheelbarrow over the box edgings and parterres of the author of the *Sylva*, that they were entirely destroyed; “which,” says he,

I can show in my now ruined garden at Say's Court, thanks to the Czar.

Mr. Evelyn was evidently a good Christian, but he appears to have overlooked the passage in Scripture, which says,

“Put not your faith in princes.”

for it does not appear that the emperor of Russia made him the least recompence for the devastation he had committed, both in the garden and the mansion; and he was certainly an unrewarded slave to Charles the second.

Mr. Evelyn informs us that Lord Dacres had a park in Sussex, environed with a holly hedge, so as to keep in any game; and he adds, “I have seen hedges, or if you will, stout walls of holly twenty feet in height, kept upright, and the gilded sort budded low, and in two or three places one above another, shorn and fashioned into columns and pilasters, architectonically shaped, and at a due distance; than which, nothing can possibly be more pleasant, the berry adorning the intercolumniations with scarlet festoons and encarpa.”

At the time this author flourished, landscape gardening did not exist, and all the gardens in Europe were laid out on geometrical principles, therefore, these shorn hedges were well adapted to the formal and gloomy dignity of the gardens of that age of avenues, right angles and octagons; yet we are of opinion with Mr. Loudon, that this style is not altogether to be condemned, it is well adapted to the palace at Versailles and of the Thuilleries, and all edifices which unite formality with splendour.

Few trees are better adapted for the lawn than the holly, as the colour either of the darkest or the most silvered, contrast equally well with the turf, and when

————— “The cherish'd fields
Put on their winter robe of purest white.”

It shines still more conspicuous; for the snows slip off the slippery leaves, as if dissolved by the fiery colour of its fruit, around which the feathered tribe crowd to claim the boon which nature has provided for them when other food is buried deep beneath the fleecy waters.

The holly which forms a verdant pavilion for the chirping tribe, protecting them from the inclemency of the stormy season, forms also a snare for their destruction; for the fowler obtains a viscid substance from the bark of this tree, which he prepares into bird-lime, and thus entangles his prey.

This tree which loves a cold loamy soil and a sheltered situation will thrive also where the south-west sea-blasts cut most other trees as if they were mown with a scythe, nor does it refuse to grow on gravel, chalk, or rocky land; and we have often seen it thrive upon brick earth, as well as upon dry hot sand and sterile heathy commons; thus accommodating itself to almost every soil and situation in the kingdom, particularly in very barren soils. The holly is valuable as well as ornamental. The timber is the whitest of all the hard woods; and therefore preferred by the turner and engraver to most others, as well as by the cabinet maker, when fashion permits the inlaying of coloured woods. It is often dyed black to imitate ebony; and it has long been in great demand at Tunbridge, in Kent, where it is manufactured into numerous fancy articles.

Deer feed upon the leaves in winter, and sheep browse upon it to their advantage.

Like the hawthorn, the holly sends forth its white blossoms in May, and its berries, like the thaws of the thorn, hang on the branches all the winter, and remain in the earth two years before they germinate, unless when they have passed through the stomach of fowls, when they vegetate the first year. We have, therefore, only to give them a similar fermentation by art, which nature gives them in the body of birds, to enable us to raise, young plants in one year instead of two. For this purpose we are recommended to take a bushel of bran, and to mix it with the seeds in a tub or earthen vessel, and wet it with soft water, and let it remain undisturbed for ten days when it will again ferment. It must be sprinkled occasionally with warm water to keep it moist, and in about thirty or forty days the heat of the moistened bran will put the berries into a state of vegetation fit for sowing in about a week after the fermentation has commenced.

March is the best season for sowing this seed, which may also be treated according to the direction given for raising hawthorns. September is the proper time for transplanting young hollies; but in cold and moist soils, they may be planted safely in the spring.

Mr. Evelyn says, he has raised hedges four feet high in four

years, from seedlings taken out of the woods. This should induce us to make more frequent trials of raising fences of this prickly plant; and particularly on hilly situations, where it affords shelter to the shepherd and his flock, against either excessive heat or piercing storms.

Old medical writers tell us, that the ripe berries are relaxing, and astringent when dried; but it is not our intention to recommend the robbing of the feathered tribe, and hurting our constitutions at the same time; nor would we willingly be deemed credulous in noticing the old customs of our forefathers, who trusted to a branch of holly for their defence against witchcraft; but this precaution has become unnecessary, since old ladies have lost their charming powers, and the spells of the youthful fair are too agreeable to be driven from us by a rod of holly.

The *Ilex Vomitaria*, commonly called the South Sea Tea, or Evergreen Cassine, is a native of West Florida, Carolina, and some of the warmer parts of Virginia, and principally found on the sea coast. This species of holly was cultivated as long back as 1700, but the severe winter of 1739 destroyed most of the plants; but it has since been raised from seeds, and is found to resist the cold of our winters without protection, except that of neighbouring shrubs. It rises to the height of ten or twelve feet, the flowers are produced in close whorls at the joints of the branches, near the footstalks of the leaves; they are of a white colour, and the fruit is a red berry, similar to the common holly. The tea made by an infusion of these leaves, is almost the only physic used by the natives of some parts of the new world.

At a certain time of the year these people come in droves from a distance of some hundred miles, to the coast for the leaves of this tree; when they make a fire on the ground, over which they place a vessel of water, and throw into it a large quantity of the leaves. They then seat themselves round the fire and take large draughts of the infusion until it operates as an emetic. In this manner they continue to physic themselves for two or three days, and when their stomachs are sufficiently cleansed, every one takes a bundle of the branches with him to his habitation.

ARTICLE VI.

REMARKS ON TROPOEELUM TUBEROSUM.

BY J. W. D.

A FIGURE of this interesting and pretty flowering plant, being recently given in the Cabinet, induces me to send the following remarks upon the plant which I cultivated during the last year.

In April 1837, I had a present of four tubers, which, as instructed, I planted in small pots, pushed them up in a hot bed frame, and then removed them into a warm greenhouse. The first week in June I turned them out of the pots entire, and planted them in a warm situation in a border in my flower garden, I had a very rich soil to grow them in. Around the plants were a number of rods, similar to what I use for sweet peas, these supported the plants from being broken by the wind, and kept them in good form as they extended, an addition of supports were given if required. I found the plant required a good supply of water. The last week in October I took up four plants, and to my astonishment, I collected half a peck of tubers in a very healthy state. I had been informed that the roots were fit to eat, and therefore had a portion boiled, and I found them to be of a soft pulpy nature, having the flavour of sea kale or asparagus, but slightly acrid, yet still very agreeable. The plant well deserves culture, both for its beauty as an ornamental flower, and for the tubers to eat.

Hackney, 1838.

J. W. D.

ARTICLE VII.

ON THE PANSEY.

BY ROSA.

As it has become a generally approved practice to have groups of flowers in varieties, as well as a bed of one colour, for the former I know of none equal to the Pansey, no other can furnish so many shades of colour as that beautiful plant. The flowers extend in colour beyond any other that I am acquainted with, and no other plant can equal it for duration of blooming. It continues from April to November. Its prolific flowering and humble growth too, very highly recommends it for beds, edging for a bed or border, or for a mixture amongst a general collection of flowers. The low price compared with some other ornamental plants, at which the various kinds are offered, affords fa-

cilities to obtain an extensive collection for a small amount of money; any other special recommendation of the pansey arises from its delightful fragrance.

During the past winter, the severity of the cold has made extensive ravages amongst the plants, and has instructed the growers with the fact, that some kinds are far more tender than others. It is very evident that plants raised from cuttings or slips, the previous summer, and are close and bushy, endure the severity of the winter the best. Plants that had been raised very early in spring, grown freely, and pushed long shoots during summer, or older plants with long shoots, have generally been cut off. To obviate this injury, it is advisable to raise a quantity of young plants each summer, or where old established plants are to remain, to have the long shoots cut in early in September, this induces a production of young and vigorous shoots, which I find will stand the severity of the winter uninjured. During winter I have observed that the frost, and worms in many cases, so operate upon the soil as to render it open and loose, it is advisable in such cases, to press close to the roots and stems, and to give an addition of surface soil.

ARTICLE VIII.

LIST OF PLANTS FOR FURNISHING BEDS IN A FLOWER GARDEN.

BY MR. THOMPSON, AUTHOR OF A PRACTICAL TREATISE ON THE CONSTRUCTION AND HEATING OF HORTICULTURAL ERECTIONS.

HAVING observed in the Floricultural Cabinet an application to any of your numerous subscribers for a list of plants best adapted for the ornamenting of flower gardens on plans similar to the engravings inserted in the Cabinet last month. Although these engravings are of a very superior description, yet in my opinion, there has been a great omission either in the artist or designer in not numbering the beds, so that any person being inclined to forward you a list of plants, suitable for that purpose, might do it more correctly, and more to the satisfaction of the reader, the numbers being a guide to the plants in each bed.

I, with much pleasure, forward you the following list of plants, which if you think worthy of a place in the Cabinet, is at your service. Great attention is necessary in the embellishment of a flower garden, to the contrasting of the tall and dwarf habited

plants in their proper situations, so as to vary as much as possible the colours of the flowers. Moreover I should advise that each of the principal beds should have standard perpetual roses introduced, and also that a few showy herbaceous plants, such as *Phlox paniculata*, *Phlox alba*, *Phlox reflexa*, *Phlox Wheelerii*, *Phlox Browni*, *Phlox tardiflora*, &c.

List I. consists of two kinds of plants grown in each bed.

Anagallis Monelli and *Lotus Jacobeus*.
Anagallis grandiflora and *Verbena Sabina*.
 Scarlet *Geraniums* and *Delphinum grandiflora*.
Verbena melindris and double white *Antirrhinium*
Verbena Drummondii and *Antirrhinium major*.
Calceolaria vicosissima, and double white *Lillies*.
Fuchsia Thomsonia, and *Delphinum Barlowii*.
Lantana Sellowi and *Verbena aubletia*.
Verbena Tweediana and *Lobelia, lutea*.
Lobelia erinus and *antirrhinium carryophylloides*.
Crassula coccinea and *Heliotropium peruvianum*.
Verbena Lambertia and *Mesembryanthemum spectabile*.
Mesembryanthemum blandum and *petunia intermedia*.
Oenothera macrocarpa and *Campanula garganica*.
 Double scarlet *Lychnis* and new white *Petunias*,
Fuchsia globosa and *Delphinum crinensis*.
Oenothera Drummondii, and *Flora cordata*.
Petunia phyllicaulis, and *Aster amelloides*.
Petunia phænicea, and *Hydrangeas*.
 Variegated leaved scarlet leaved *Geraniums* and *Delphinum grandiflora*.
Oenothera missourensis and *Mesembryanthemum floribundum*.
Phlox Drummondii and *Petunia gracilis*.
Oenothera Drummondii and *Campanula latifolia*.
Calceolaria majori and *calceolaria integrifolia*.
Heliotropium peruvianum and *Crassula coccinea*.
Verbena melindris and *Istoma axilaris*.
Oenothera dispatosa and *Beauverdia triphylla*.
Fushia conica and *Oenothera speciosa*
 Brighton scarlet geranium and *Hydrangeas*.
Boulevard triphylla and *Petunia macrocarpa*.
Verbena incisa and *Verbena Lambertia*.

List II. has only one species of plants grown in each bed.

Anagalis monelli	Lantana Sellowi
Anagalis grandiflora	Verbena arranana
Scarlet geraniums	Crassula coccinea
Delphinium grandiflora	Ænothera macrapa
Verbena Drummondii	Ænothera Drummondii
Double white Antirrhinum	Ænothera missouriensis
Verbena melindris	Calceolaria majori
Calceolaria viscosissima	Esholtzia crocea
Fuchsia Thomsonia	Heliotropium peruvianum
Verbena Tweediana	Petunia intermedia
Double scarlet Lychnis	Delphinium crinensis
Lobelia lutea	Phlox cordata
Fuchsia globosa	Aster amelloides
Petunia phyllacaulis	Hydrangeas
Antirrhinum major	Ænothera speciosa
Petunia phoenicea	Calceolaria integrifolia.

ARTICLE IX.

REMARKS ON THE ROSE.

Continued from page 180.

Fabulous authors also account for the delicious perfume of the rose, by telling us that Love, in a feast of Olympus, in the midst of the gaiety of a light and lively dance, overthrew, with a stroke of his wing, a cup of nectar, which precious liquor falling on the rose, embalmed it with that heavenly fragrance which it still retains.

Mythological writers also relate that Rhodante, queen of Corinth, to avoid the pursuit of her lovers, fled to the temple of Diana to conceal herself; but being besieged by lovers, and obliged to appear, she called on the people for assistance, who, on beholding her beauty, threw down the statue of Diana, and declared her to be the goddess of the temple; upon which Apollo changed her into a rose.

The first rose ever seen was said to have been given by the god of love to Harpocrates, the god of silence, to engage him not to divulge the amours of his mother Venus; and from hence the ancients made it a symbol of silence, and it became a custom to place a rose above their heads in their banquetting rooms, in order to banish restraint, as nothing there said would be repeated

elsewhere ; and from this practice originated the saying, " under the rose," when any thing was to be kept secret.

The Turks are great admirers of this beautiful flower, and Mussulmen in general believe, that it first sprang from the perspiration of Mahomet, on which account they will not suffer a rose leaf to lie on the ground, or permit any one to tread upon this sacred flower.

In the luxurious days of the ancients, even the warriors crowned themselves with garlands of roses, during their principal repast ; and Pliny tells us, their delicate meats were either covered with the petals of these fragrant flowers, or sprinkled with its odorous oils. At a feast which Cleopatra gave to Anthony, the royal apartments were covered with rose leaves to a considerable depth.

The triumvir, when dying, begged of the captivating queen that she would scatter perfumes on his tomb, and cover it with roses.

In Turkey, a rose is sculptured on the monument of all ladies that die unmarried ; and in Poland they cover the coffins of children with roses, and when the funeral passes the streets, a number of these roses are thrown from the windows. Camden tells us, " There is a classical custom observed, time out of mind, at Oakley, in Surry, of planting a rose tree on the graves, especially of the young men and maidens who have lost their lovers ; so that this church-yard is full of them." It is the more remarkable, since it was used anciently both amongst the Greeks and Romans ; who were so very religious in it, that we find it often annexed as a codicil to their wills (as appears by an old inscription at Ravenna, and another at Milan), by which they ordered roses to be strewed and planted over their graves.

This ancient custom of decorating graves with flowers, the symbols of fleeting mortality, has almost passed from recollection in this country, and is rapidly disappearing in most parts of Wales ; but we read in the " Beauties of England," that Thomas Stevens, a poor and aged man, who lies buried in the church-yard of the village of Stokenchurch, in Oxfordshire, left a request that his oldest son would annually dress his grave with flowers on the recurrence of the wake of St. Peter's.

The Mexicans, says the Abbé Clavigero, have from time immemorial studied the cultivation of flowers and odorous plants which they employ in the worship of their gods ; and in the tem-

ple of the true God, the high priest was formerly crowned with roses. The Catholic church has still preserved the use of these flowers in its most sacred ceremonies, as it is always the rose that they strew before the holy sacrament in solemn processions.

There is now to be seen at Rome in the church of Saint Susan, an old Mosaic, which represents Charlemagne kneeling, receiving of St. Peter, a standard covered with roses. The custom of blessing the rose is still preserved at Rome, and the day is called *Dominica in rosa*. They make in that city artificial rose-trees of pure gold, which are blessed by the Pope on the first Sunday in Lent, while they sing *Lætera Jerusalema*, and which after mass, he carries in procession, and then sends it to sovereigns, or presents it to princes who visit his capital: and it was the custom until about these last forty years, for the prince who received this rose tree, to give a sum equal to five hundred pounds to the person who brought him this present from the pope; but the rose-tree itself was worth twice that sum.

Pope Julius the Second sent a consecrated rose of gold, dipped in chrism, and perfumed with musk, to Archbishop Warham, to be presented to Henry the Eighth, at high mass, with the apostolical benediction. The king received the precious rose, and more precious benediction, with profound reference and excessive joy. But every body knows how soon the remembrance of this rose faded with this capricious monarch.

Mary Stuart, queen of Scots sent a magnificent rose-tree to Rosnard, the French poet, of the sixteenth century which was valued at two thousand crowns, with this inscription: *Rosnard, l'Apollon de la Source des Muses*.

Bayle relates an accident which happened at the baptism of Rosnard. In those days it was customary to bring large vases full of rose water, and baskets of flowers to christenings; and as the nurse was going to church with the infant bard, she let her flowers fall, and in turning to recover them, she touched the attendant who carried the vase of rose water, and spilt it on the child; and this says Bayle, was since regarded as a happy pre-sage of the good odour that would some day scatter his poetry.

Painters represent Saint Dorothy holding a nosegay of roses, because it is told in her life that an angel gave her a bunch of roses; and a prodigy is related of Saint Louis the Ninth of France. It is pretended that a rose was seen to come out of his mouth after his death.

In the Abbey of Saint Croix, at Poitiers, they show a pillar that was raised to commemorate a pretended miracle, and where they tell you a rose-tree in full blossom sprung out of the grave of a young man after the day of his interment. It is truly shocking that the teachers of Christianity should countenance such absurd superstitions. We could enumerate many others coupled with the rose; but we are more anxious to give space for an account of the agreeable use to which this flower was put by Saint Medard, who about the year 530 instituted the most affecting prize piety has ever offered to virtue. It was a crown of roses for that villager's daughter who was the most modest, most obedient to her parents, and the most discreet. The first rose tree was his own sister, whom he crowned in the church of Salency.

We cannot pass over unnoticed the well-known story of the rose leaf, which shows how fond the eastern nations were of conveying their thoughts by hieroglyphics.

At Amadan there was a famous academy, the rules of which were, that the members of it should think much, write little, and speak as seldom as possible. Zeba, a learned doctor, celebrated all over the east for his great knowledge, hearing of a vacancy in this institution, hastened to the city in order to be elected. Unfortunately he arrived too late, for the place had already been filled by a candidate, who, like many in those times, owed his success more to his power than to his deserts. The president of the academy filled a vase so full of water that an additional drop would make it run over, by which the doctor was to understand that their society was too full to admit of another member.

The learned Zeb was retiring sorrowfully, when by chance he perceived a petal of a rose at his feet, which he seized with promptness, and placed so delicately on the top of the water, that it did not disturb it in the least. This ingenious allusion was received by the assembly with the greatest approbation, and the academicians testified by their unanimous applause, their consent to the reception of the illustrious Zeb as a member of their mute society.

(To be continued)

PART II.

LIST OF NEW AND RARE PLANTS.

Noticed since our last.

1. FUNCKIA SIEBOLDIANA.
- Dr. Siebold's.*
- Bot. Mag. 3663.

HEMEROCALLIDÆ. HEXANDRIA MONOGYNIA.

This species was discovered in Japan by Dr. Siebold. It has bloomed in the Glasgow Botanic Garden flowering in the Greenhouse in July. The flower scape rises more than a foot high, bearing a drooping raceme of lily like flowers, white tinged with purple and green.

2. GESNERA TUBEROSA.
- Tuberous-rooted.*
- [Bot. Mag. 3664.

GESNERIACEÆ. DIDYNAMIA GYMNOSPERMIA.

This species was sent to this country from the Berlin gardens by the name of *G. rupestris*, by mistake. The leaves are eight inches long, by six and a half broad. It blooms freely during autumn in the hothouse. The flowers rise above the surface of the tuber from two to three inches high. Each tuber producing twenty and upwards. The flower is rather more than an inch long, tubular, curved slightly. The limb of the corolla is of a deep scarlet, the inside of the tubular portion yellow, and of a yellowish red.

- NEMESIA FLORIBUNDA.
- Many flowered.*
- (Bot. Reg. 39.

SCROPHULARIACEÆ. DIDYNAMIA ANGIOSPERMIA. Synonym *N. AFFINIS*,

3. A pretty little annual, whose blossoms strongly resemble some of the *Linarias*, the plant grows about a foot high, branching, producing numerous flowers, each about half an inch across. White, with a tinge of yellow on the upper lip. It blooms in the open border from June to September.

- PHALÆNOPSIS AMABILIS.
- The Indian Butterfly Plant.*
- (Bot. Reg. 34.

ORCHIDÆ. Synonym. EPIDENDRUM AMABILE.

4. It appears this singular species was first met with on the woody coast of Nusa Kambanga, by Dr. Blume. Rumph in noticing it says, "in Amboyna it grows on thick short trees, covered with moss, and it proceeds up such, coiling like a rope, and hangs down at the termination in entangled tufts.

It has recently bloomed in the fine collection of Messrs. Rollinson's, Tooting, for the first time it is supposed in this country. The form of the flower is very curious; the petals are of a pure white, broad, and of a leathery appearance. Labellum, white, streaked and lined with yellow and red. Each flower is near three inches across. The flower stem produces a panicle of many flowers. The plant grows freely, being fixed to a piece of wood, along with a little moss or turf attached, the whole being suspended in the orchidæ house. Whenever this mode of affixing orchidæ is adopted, the wood should be covered with rough bark, or be in a decaying state to enable the roots to fix themselves to it.

RHODODENDRON NUDIFLORUM ; var. SCINTILANS. *Sparkling Rhododendron*. (Bot. Mag. 367.

ERICÆ. DECANDRIA MONOGYNIA.

5. This variety was raised at East of Carnaroons, High Clere. It is cultivated extensively, with others by Mr. Curtis, at Flazenwood. The flower is red, with the exception of the upper petal, which is of a fine orange. It is a beautiful variety.

SALVIA CANENSCANS. *Horny Sage*. (Bot. Reg. 36.

LABIATÆ. DIANDRIA MONOGYNIA.

6. It is a native of the rocks of Caucasus. It is a hardy herbaceous plant, having the leaves covered with whitish wool, but the stems with longish hairs. The flowers are of a fine deep white purple, produced numerously on branching spikes, which rise to about two feet high. It is a pretty plant either for rock work or the flower border. It has bloomed in the garden of the London Horticultural Society.

TRITONIA FACCATA. *Painted Tritonia* (Bot. Reg. 35.

IRIDACEÆ. TRIANDRIA MONOGYNIA.

7. Cultivated in the collection of the Hon. and Rev. W. Herbert, Spafforth Mr. Wetherby, who received bulbs of it from the Cape of Good Hope, twenty-five years ago, but it did not bloom till last year, and that appears to have been the result of dung having been laid over the patches of bulbs in the open border. The flowers are produced upon a spike (twelve or more upon each) which is decurved from the part where the first flowers arise, from which circumstance, the flowers standing erect, show themselves advantageously, and produce an interesting appearance. The upper part of the labia is of a deep blood red, the lower part, of five recurved divisions, yellow streaked with brownish red.

CATILEYA MOSSIÆ. *Mrs. Moss's Superb Cattleya*. (Bot. Mag. 3669.

GYNANDRIA MONANDRIA. ORCHIDÆ.

8. The flowers of this species are certainly the most magnificent of any orchideous plants yet bloomed in this country. The flower is eight inches across, and each petal, being four inches long and two broad, and the entire flower more than twenty inches in circumference. The colour and marking of the flower is very striking. The petals are of a beautiful rosy lilac. The inside of the tubular part of the labellum is yellow, the other portion of it rosy lilac, splendidly streaked and blotched with crimson scarlet, the lip spreading near three inches across. The flower is also peculiarly fragrant. The plant is a native of La Guayra, and was sent from thence in 1836 to the fine collection of Mrs. Moss, Otterspool, near Liverpool, where it has recently bloomed under the skilful management of Mr. James, the gardener. It ought to be in every collection of orchideæ, and no reasonable price ought to be objected to, in order to obtain it.

SALANUM CAMPANULATUM. *Bell Flowered*. (Bot. Mag. 3672

SOLANÆ. PENTANDRIA MONOGYNIA.

9. A native of New South Wales, and in this country has bloomed in the greenhouse of the Edinburgh Botanic garden. The stem is herbaceous. The flowers are produced in terminal racemes, the Corolla of a fine purplish blue, bell-shaped, an inch and a half across.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE RETARDING THE BLOOMING OF FLOWERS.—All gardeners are busy in making early flowers; is it possible to retard flowers, as to have those kinds which usually bloom in spring or early summer, to bloom in autumn? as for instance, the Pœony, Gladiolus, &c. Suppose the bulbs of the latter were taken up and not replanted till the middle of the spring, what would be the effect? If any reader of the Cabinet should have tried the experiment, I should be obliged for information as to the result, and if successful, mode of treatment pursued?

I wish that you would give me a list of those Geraniums (Pelargoniums) which may be said to blossom perpetually all the season (as the red does,) with the prices and where they may be got. Also, where is the most likely place to get these kinds that are good, but are become a little old and out of fashion. I think several of the best florists, or at least the most eminent do not consider it worth while to keep them, and it is therefore difficult to find them,

Will Geraniums, Pelargoniums, or Erodiums, produce hybrid flowers among themselves?

I wish you would give a list of those shrubs which has been introduced within the last few years, which are so hardy as to be useful in gardens and grounds. I love the open garden and its variety, and happy to inform you that the Araucaria is quite hardy, having stood through the last winter unprotected, although it was removed in the autumn.

HARDY.

(We have tried experiments of this kind with many flowers, and although we succeeded to bloom Ranunculuses, Anemonies Pœonies, Gladioluses, and Ixiases, of the tribe of early flowers, as late as August and September; they uniformly bloomed much weaker than at their proper season. Early blooming annuals can of course be made to bloom late by sowing seed accordingly. We tried several successive years to hybridize the Pelargoniums with the blue flowered Garden Geranium, but could not succeed. A white flowered Pelargonium was impregnated with *G. striata*, the pretty striped flower of the borders, and it was judged to have effected the purpose; a striped flowering Pelargonium was raised. But as sufficient care was not taken to prevent impregnation from some other Pelargoniums, it could not be positively determined as to the real fact. Perhaps some of our numerous readers may be able to give us additional information. If our correspondent requested a list of the sorts desired, with prices of any of the celebrated Pelargonium growers in his own neighbourhood (London) such would be cheerfully furnished; and such a person is most likely to know the habits of nearly every kind that has been celebrated for the last ten years, and would either furnish them, if desired, or give information where it was probable that they may be obtained. By raising plants at various seasons, or heading down in such a manner, repotting, &c. the flowering season may be prolonged, so as to have early and late, but the late blooming plants never can be caused to bloom as fine, as at their usual season in spring or early summer.—CONDUCTOR.)

ON NELUMBIUMS.—A few hints on the culture of these beautiful plants will be thankfully perused by your constant reader.

Canterbury July 13th, 1838.

J. P. K.

ON AMARYLLIS.—I would be glad to know from some of your readers, who cultivate the different species of Amaryllises, of the best mode of treatment. I have just had a collection of seventy-two kinds presented me, but not being properly acquainted with their culture, I feel very anxious to learn.

Should the bulbs be taken up and dried annually?

A YOUNG AMATEUR.

ON PACKING PLANTS.—A. M. D. would be considerably obliged by being furnished through the medium of the Cabinet with any practical information upon the best mode of packing and managing plants during a voyage. Mr. M. D. has many opportunities of receiving plants from his friends residing abroad, which he certainly should do, when he is acquainted with the best practical method of transmitting them. An early answer will greatly oblige.

Liverpool, June 28th, 1838.

ON CACTI.—I should feel much obliged if any of your correspondents would inform me through the medium of the Cabinet, respecting what I call a phenomena of nature. The cause, why a piece of one of the tribe of Cacti, which I observed a short time since in a garden, after being cut from the plant, and laying a fortnight on a shelf in the greenhouse, to produce as perfect a flower as when growing on the plant, the bud not being nearly matured when taken from the stem. Not having observed a thing similar before, and feeling an interest in botanical knowledge, induced me to send this, and should feel extremely obliged, by its insertion in the Cabinet.

ORBITOLOGIST.

REMARKS.

New and Rare Plants.

RUELLIA ELEGANS.—This new and dwarf species has bloomed beautifully at Mr. Young's of Epsom, and Mr. Lowe's of Clapton in the stove. The flowers are of a pretty blue, producing a very lively appearance which has continued for several months successively.

SIPHOCAMPYLUS BICOLOR.—This plant is in fine bloom at Mr. Henderson's, Pine Apple Place, Edgeware Road; its scarlet and yellow flowers, singular in form, are produced for many successive months. It is very ornamental for the greenhouse, or conservatory.

PESTEMON COBCEA, is also in fine bloom at Mr. Henderson's, it is a most magnificent species, well deserving a place in every flower garden. The corolla is more than an inch across at its mouth, and such flowers are numerously produced.

HIPPEASTRUM AMBIGUUM LONGIFLORUM.—This new variety is in bloom at the Epsom nursery. The flowers are very large, of a pretty cream colour streaked with crimson. It deserves a place in every greenhouse.

FUSCHIA FULGENS is now in bloom in several nursery and flower establishments, and in its vigorous state is a most magnificent object as a Fuchsia. Whether the fine foliage or large and brilliant flowers be noticed, each render it deserving of a place in every greenhouse.

COMESPERMA GRACILIS, is in bloom in the greenhouse at the Epsom nursery, the plant is shrubby, a twiner of graceful habit, the leaves are narrow, about an inch long. The flowers are produced in profusion on the slender stems, in racemes of ten or twelve on each, of a lively violet colour very

much resembling the little British *Polygala*. It is a very neat and pretty species.

ON *TROPEAEOLUM TRICOLORUM*.—If the bulb be planted so near the surface of the soil in the pot as to leave the upper part half bare, it will swell, and the size will be very greatly increased. This mode of treatment only benefits the bulb, the season it is done, for though it contributes to enlarge the bulb, the shoots are rendered so weakly by it, as to bloom very sparingly. The bulb, however, being so much increased in size, is capable of producing shoots and flowers the following season proportionately larger as well as more of the latter, when planted and treated in the following manner the succeeding season. See soil described in pages 148 and 170.

The delicate roots of the *Tricolorum* are not numerous, and consequently do not require a large pot, but when the roots extend to the side of the pot, the operation of dry heat upon it, injures the roots, and causes the foliage to become yellow and sickly. To obviate this, recourse has been had to plant the bulb in a large pot, as the roots do not extend far from the bulb, they would not then be liable to the injury as in small pots; but in this mode the water necessary to give the plant saturates the soil, so as to sour it, and render it injurious to the plant, in which case the foliage turns yellow and sickly, and sometimes the habit is destroyed. It has been found, however, that the injury is obviated, by planting the bulb in a smallish pot when the stem has pushed a foot, the pot is then placed inside a larger one, and the space is filled up with river or other sand. This is kept moist by often watering, and thus keep the roots, which extend to the side of the pot in which the bulb is planted, cool and moist, and renders it less necessary to water the soil. Plants thus treated flourish amazingly, and amply repay the attention paid to them.

FLORA.

ON THE *CATTELEYA GUTTATA*.—There is perhaps no genus of orchideous epiphytes yet in our gardens such a general favourite as *Cattleya*, a circumstance which is to be ascribed in part to the great beauty of such species as *C. labiata*, *Loddigesii*, and *crispa*; and doubtless also in part to the readiness with which they adapt themselves to the artificial state of life under which they are necessarily preserved in our hothouses.

There is, however, a great difference in the degree of success with which these plants are managed, even by excellent cultivators; for if we see *C. labiata* and *crispa*, with two or three flowers in a cluster, so as also we do see them with a larger number; *C. crispa* in particular, has been grown with seven flowers, by Mr. Paxton, gardener to his Grace the Duke of Devonshire, thus forming a spectacle of almost unrivalled beauty, and pleasing to look upon. The most striking instance of remarkable success in this matter that has come to my knowledge, is in the case of a plant of *C. guttata*, flowered in the hothouse of Richard Harrison, Esq. of Aighburgh, near Liverpool, and by him exhibited at the meeting of this society, on the 6th of December last, when the silver Knightian medal was awarded it.

C. guttata is a native of the woods about Rio Janeiro. It was originally sent to the Horticultural Society of London by the Right Hon. Sir Robert Gordon, and has recently been met with by Mr. Gardener in abundance on trees and plants in the same country.

It generally produces two or three yellowish green flowers, richly spotted with crimson, which is its condition in a wild state; occasionally five or six are seen, and possibly more. The specimen to which I allude had no fewer than twenty-four flowers on one raceme, and was altogether, with the exception of an *Aerides cornutum*, in the possession of Messrs. Loddiges, which is the most noble specimen of this natural order of plants that I have had the good fortune to observe. The lovers of Flora will be glad to learn the method which Mr. W. Perrin, gardener to Mr. Harrison adopts to cultivate this beautiful plant. It is as follows.

“The soil in which I grow *Cattleyas* is a compost of peat earth, and bro-

ken potsherds in equal quantities. I always pot at the time the young shoots begin to grow, do not use very large pots, but endeavour to proportion the pot to the plant. In potting I always keep the plant a little higher than the top of the pots, as these plants suffer from being disturbed in their roots too often. I do not pot them oftener than can possibly be avoided. The *Cattleya guttata*, the flower of which was sent to the Horticultural Society, has not been repotted for the last three years. I keep the plants in rather a low heat during the winter months, the thermometer generally ranging from 50 to 60 degrees. As the spring approaches, I increase the heat, keeping the hothouse more moist. In the latter end of the spring and summer months, the temperature is maintained between 70 and 100 degrees, and the moisture is increased as much as possible, with a little shade in very bright weather over the glass. When the plants have done flowering, and the young shoots cease to grow, I begin to lessen the quantity of water, till the approach of winter, when it is entirely withheld for that season. As soon in the spring as they begin to make their young shoots, they are potted, if I judge they want; if not, they are top dressed, and I begin to water, as I left off, by degrees, till the summer, when I water very freely."

Mr. Perrin is equally successful in his propagation of *Cattleyas*, and gives the following account of his plan:

My first trial was on a large plant of the *Cattleya crispa*, which had eight old shoots and two young shoots, gone over the side of the pot. I took a sharp penknife and cut the plant through carefully in three places, taking care not to disturb the plant, or to cut away any of the roots. To my great surprise, in a short time I had two fine shoots at the side of each old one where I had cut. I have now eight young shoots, and I believe, had I cut it through at the side of all the old shoots, I should have had sixteen new shoots. I intend to cut the remainder of the shoots through next season. I should say in this place, that the two young shoots that were on the plant before I cut it through, did not suffer by the wound. I think they grew equally as strong and faster than before, which makes me think that the old part of the plant is of no use to the new shoots after they have made their roots. I have been informed that this method of increasing orchideous epiphytes will not succeed, excepting on large established plants; but I have tried it on very small plants, and have found it to answer as well as on larger ones,

A LIST OF SUCCESSION PLANTS FOR A FLOWER GARDEN.

The following is a list of plants which are well calculated to insure a succession of flowers in the garden, and such a list being requested at page 183, I send it for insertion in the Cabinet.

In the Snowdrop bed, plant Lily of the Valley; turn out from pots in course of time into the Crocus bed, *Clarkia pulchella*; double blue *Hepatica* bed, *Calcoularias*; double Pink ditto, *Schizanthus*; *Scilla bifolia*, *Colinsia bicolor*; *Leptosiphon densiflorus*, *Pelargoniums*; *Hyacinth*, *Cacalia*; *Anemone*, *Clarkia pulchella alba*; *Polyanthus* and *Narcissus*, *Eutoca viscida*; *Ranunculus*, *White Petunia*; *Heartsease*, *Goodetia rubicunda*; *Lupine*, *Mimulus cardinalis*; *Larkspur*, *Lobelia cardinalis*; *White Rocket*, German *Asters*; *Sweet-william*, *Marvel of Peru*; *Clabanthus arabicas*, *Marygolds*; *Pinks*, *Balsams*; *White Saxifrage*, *Clintonia pulchella*; *Roses*, *Coreopsis*; *Nemophilla insignis*, *Fuchsias*; *Bartonia aurea*, *Double Jacobæa*; *Scarlet Zinnias*, in the same bed as *Verbena melindres*.

The great secret in the management of a flower garden, is to have an abundance of things ready in pots, to turn out in the beds when the early flowers are beginning to fade. I shall feel obliged if some correspondent will inform me what annuals will be best to plant out in the shade, and under trees.

PATRICK.

TEALEY'S QUEEN VICTORIA PINK.—This new kind has been exhibited at some of the shows in London, and is highly spoken of by some of the Florists. It is said to be a first rate flower, colour, light purple laced.

ON GREENHOUSE AZALEAS.—Many of the most handsome flowering plants are found to die in winter, the fibrous roots being so fine and delicate, that the least excess of moisture causes them to perish; to prevent this, a mode of treatment has been found effectual, by grafting or inarching the delicate kinds upon stalks of the *Azalea indica phænicea*, that kind being more robust and of vigorous growth, it not only endures well through winter, but those kinds worked upon it, grow much more vigorous and bloom far more profusely.

(Grafting or inarching is easily effected, in the same manner that is done with the *Camellia*, the method deserves the attention of all persons who are cultivators of this charming tribe of greenhouse plants. We were astonished with the vigour and beauty of many superb specimens of the delicate sorts, that by this mode had been rendered very luxuriant; which we saw in several of the London nurseries this spring and summer; stocks are easily procured at a cheap rate, or raised by cuttings in sand.)

CONDUCTOR.

NORTH DEVON HORTICULTURAL SOCIETY, took place at the public rooms, Barnstaple; the show of fruit in consequence of the extreme backwardness of the season, was not large, yet contained many fine specimens of various sorts; but of plants and flowers, the display excelled that of any former occasion; the vegetables also were very fine and in great abundance.

T. Downes, Esq., Marwood, provided a very fine specimen of the *Cactus Speciosissimus*, with a variety of Tender annuals and Ranunculuses. This gentleman had also some very rare plants, which we noticed on a table set apart for them, and a description of which may not prove uninteresting. In the first place, our attention was taken with the Manito or Hand tree, (from its resemblance in form to the human hand;) only three specimens are said to be in existence—two in the small botanical gardens of the palace of Mexico, and one at the town of Tocola; the tree at its full growth, is forty feet high, with a smooth trunk, without branches to the top, but the boughs then stretch over a considerable space, with large leaves and numerous flowers, hanging downwards from amongst the foliage, it bears a stronger resemblance to the plane or the tulip tree, than any other we are acquainted with in Britian. The next was a Lichen from Mexico, a very curious plant, (from the vicinity of Tepic,) which, when immersed in water, resumes the appearance of vegetation, and recovers its green colour, retaining this quality during any number of successive trials. The third is a very singular production, called the Flor de Madera, or Wooden Flower, ascribed by some to the effect of a parasitic creeper, but by others to the injury of a young shoot they grow in a variety of odd forms; but the diseased excrescences of plants are usually shapeless, and covered with bark. Besides these, there are twenty-four varieties of the Cacti, from Real del Monto.

REFERENCE TO PLATE.

1. *CHRYSANTHEMUM INDICUM*, var. *MINERVA*.—This very fine variety was raised by Mr. Freestone, Watlington Hall, near Downham. Mr. Freestone has been by far the most successful raiser of fine hybrid *Chrysanthemums* in this country.

2. This unique and pretty variety was also raised by Mr. Freestone.

3. Purple edged rose leaved Seedling Pink, raised by Mr. Neville, Walworth, (who also raised the "Hope Dahlia";) it is admitted by all florists who have seen it, to surpass by far all others of its class. The specimen sent us was the most perfect we ever saw.

FLORICULTURAL CALENDAR FOR SEPTEMBER.

Annual flower seeds, as Clarkia, Collinsia, Schizanthuses, Ten-week Stocks, &c., now sown in pots and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when Spring sown plants are coming into bloom,

Carnation layers, if struck root, should immediately be potted off.

China Rose cuttings now strike very freely; buds may still be put in successfully.

Mignonette may now be sown in pots, to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants from such, will bloom in May.

Pinks, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season.

Plants of Herbaceous Calceolarias should now be divided, taking off offsets and planting them in small pots.

Verbena Melindres (*chamedrifolia*.) Runners of this plant should now be taken off, planting them in small pots, and placing them in a shady situation. It should be attended to as early in the month as convenient.

Plants of Chinese Chrysanthemums should be repotted if necessary; for if done later, the blossoms will be small. Use the richest soil.

When Petunias, Heliotropium, Salvias, Pelargoniums, (Geraniums,) &c., have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips, and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided, and planted out the ensuing May in open borders of rich soil, the plants will be stocky and bloom profusely.

Tigridia pavonia roots may generally be taken up about the end of the month.

Greenhouse plants will generally require to be taken in by the end of the month, if allowed to remain out much longer, the foliage will often turn brown from the effects of cold air.

Plants of Pentstemons should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

PANZIES.—The tops and slips of Panzies should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root very freely, and be good plants for next season.

Evergreen hardy shrubs may be planted, puddle and water freely till the autumn rains set in.

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Lilium speciosum



Penstemon heterophyllum



Lophospermum scandens

THE
FLORICULTURAL CABINET,

OCTOBER, 1st, 1838.

PART I,
ORIGINAL COMMUNICATIONS.

ARTICLE I.
ON THE PLANNING AND FORMATION OF ORNAMENTAL
FLOWER BEDS.

BY MR. G. E. TURNER, MONKTON PARLEIGH, NEAR BATH.

I NEVER enter a flower garden without pleasure, or leave it without satisfaction. Each little plant has beauties and attractions, which never fail to captivate and delight. In the excellent pencilling, and the delicate hues of a flower, I can trace the eternal wisdom and unbounded benevolence of its Creator, and read and read

“ And read again, and still find something new,
“ Something to amuse, something to instruct.”

And it is because I have myself derived such refined gratification from floricultural amusements, that I would humbly contribute my mite, to the valuable treasury of useful and practical information, whose benefits are distributed to the public, through the widely circulating medium of the Floricultural Cabinet.

Now, although in every garden each individual flower is the immediate and proper object of our admiration, yet it must be

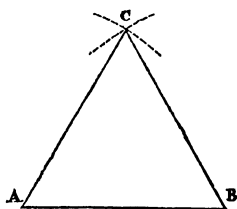
VOL. VI. No. 68.

allowed that a just arrangement of height, and combination of the colour, will add much to general beauty of the whole picture; and this is easily and usually effected in proportion to the taste of fancy which every (even the most uneducated) gardener possesses in a greater or less degree.

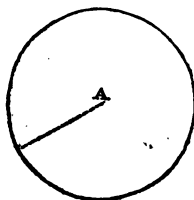
These beauties, I observe, are displayed because they depend much upon taste and little upon skill: not so however with the formation of beds. Though a point of paramount importance in forming an ornamental flower garden, yet there are but few ordinary gardeners who are capable of planning or cutting out a number of beds with taste or precision. They may, perhaps, form in their minds many a beautiful and elegant design, and yet be quite unable to reduce it to practice, and the reason is this, it cannot be done but upon mathematical principles, which have never yet been placed within their reach, and it is to communicate these principles in a simple and appropriate form, that I beg to offer the following plan to your notice, in which I trust, the most learned of your readers will find nothing to despise, and I am sure that many of your more humble subscribers, will acknowledge much to be acceptable, interesting, and useful.

The following figures may be drawn for practice on the boarded floor of a room with chalk.

No. 1.



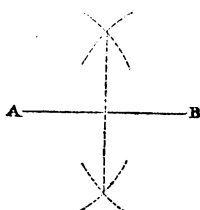
No. 2.



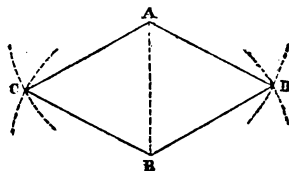
No. 1.—Draw A B, and with its length, from each end describe arcs cutting each other in C: join A B.

No. 2.—Fix a stiff stick in the centre A, slip the loop end of your twine on the stick, and draw the circle at any distance from A.

No. 3.



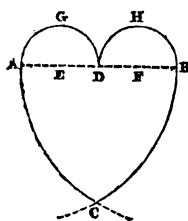
No. 4.



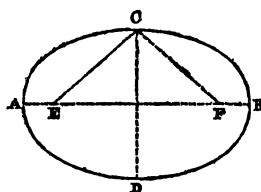
No. 3.—To divide a line into two equal parts, describe corresponding arcs at any distance on each side of A B, and from one point where they cut to the other, strain your line, and it will equally divide A B.

No. 4.— Upon each side of A B, describe the triangle A C B and A D B as in No. 1.

No. 5.



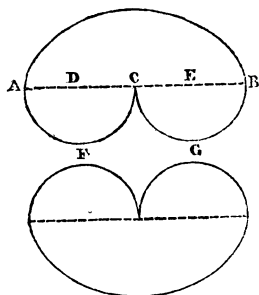
No. 6.



No. 5.—From A and B, describe the arcs A C and B C divide A B in D; and again divide A D and B D in E and F, and from E and F describe the half circles A G D and B H D.

No. 6.—Draw A B, divide it and draw C D equal to two-thirds of A B. From C draw C E, C F, each equal to the half A B; and in the points E and F fix a stiff stick, on which slip the ends of a piece of twine by loops, equal to A B, then carry a pointed stick round by the twine, and the oval will be thus correctly drawn.

No. 7.



No. 7.—Upon AB describe half an oval as in No. 6. Divide AB in C, and again divide AC and CB in D and E, and from these centres describe the half circles AFC and CGB.

ARTICLE II.

ON SAVING SEED FROM CHRYSANTHEMUMS*.

BY MR. R. FREESTONE, WATLINGTON, NEAR DOWNHAM, NORFOLK.

WHEN the flowers are fully expanded, take a fine camel hair pencil, and fill it well with pollen from any of the semi-double flowers, apply this to the stigma of the two outside rows of petals. When the flowers begin to decay, cut them off as close as you can without injuring the seed-vessels. Place the plants in the warmest and driest situation, a dry stove is the best; watch them daily to see that no mouldiness contracts upon the flower-stems or seed vessels, if any appear, let it be wiped off.

The seed will be ripe in about six weeks from the time of impregnation, when so, cut and hang it in the driest room you have.

Early in February let the seed be cleaned from the husk, and sown in light soil, covering it a quarter of an inch with finely sifted compost; place the pot in a cucumber or pine-pit worked with dung, and in about a month from the time of sowing, the plants may be expected up; as soon as they are strong enough, pot them off into small sixties*, re-pot them as the pots become full of roots, until you get them into pots of nine inches in depth

* In this country it is necessary to force them into bloom as early as possible.

and diameter; keep them in heat as long as possible without drawing the plants, and many of them will bloom the first year.

R. FREESTONE.

ARTICLE III.

ON THE HARDIHOOD OF THE MYRTLE.

J. G.

ABOUT seventeen years ago I planted a myrtle about a foot high against a kitchen wall, and sheltered it with matting, every winter; it grew the height of the wall (about eighteen feet) two or three times, and flowered profusely. The winter before last, having removed, I sent for this tree, it was by some neglect left on the lawn, after having been dug up two nights with four or five degrees of frost; it was planted in a southern aspect, without shelter, all the winter. It dropped in consequence some of its leaves, and did not flower, no doubt on account of its removal, otherwise in the autumn it was as luxuriant as ever.

This last winter it was unsheltered through all the severest weather, and appears to have suffered much the same as the Bays and Lauristinus. Unfortunately it was cut down with the latter, or I have very little doubt it would have shot out in its upper branches. It has now innumerable shoots a foot from the ground. Its roots when dug up, contrary to what my gardener expected, extended only about six or eight inches from the trunks, of which latter, there were three or four, three inches in diameter.

The purport of sending this is the inducement it may hold out to some of your readers to grow it in sheltered situations as a hardy tree, few trees would look handsomer as a standard, and I have but little doubt that with shelter the first and second winters it would thrive in most English counties, I should say this was grown in Essex five or six miles from London, and the thermometer one night last winter was below Zero.

J. G.

July 13. 1838.

P. S. A *Magnolia grandiflora* has survived the winter without shelter on the lawn in the same garden.

ARTICLE IV.

ON THE CULTURE OF THE HYACINTH.

BY H. L.

As the time for planting bulbous roots is approaching, I send these lines on the culture of the Hyacinth, deeming it probable you may consider them worthy a place in the Floricultural Cabinet. It is much to be regretted that so beautiful a flower should not be more generally cultivated, especially as it blooms so early in the spring, at a time when flowers are a desideratum.

Hyacinths may either be planted in pots, or beds, or be placed in bulb glasses; which latter method is the favourite one, especially with the ladies.

I shall therefore first offer a few remarks on the blooming of them in water.

The bulbs should be put into the glasses sometime in the month of October or November, but to speak more exactly, when the incipient fibres or roots make their appearance, and the scapus or flower stalk be just discerned making its way to the top, the water should cover the whole of that part whence the fibres proceed. It must be soft or rain water, and requires changing as often as it becomes offensive, which generally occurs in about ten days after the putting in, and afterwards varies from a fortnight to three weeks.

They should be placed in a situation where the light is not very strong, and unless for forcing, where there is no artificial heat. The mantle-piece of a room in which there is a fire, must be avoided, for nothing tends more to cause a deterioration in the bells, and to produce an unmanageable tall stem.

Time will not permit me to add more now, as I wish to transmit this in time for insertion in the next number of your Work, and my concluding observations on the culture of Hyacinths in beds or pots, shall, if it meet your concurrence, appear in the November Number.

H. L.

Islington, 14th Sept, 1858.

[We feel much obliged by the kindness of our correspondent, and shall feel additionally so, to receive the other remarks as soon as convenient.]

ARTICLE V.

ON A LIST OF PLANTS FOR FURNISHING A FLOWER GARDEN, SO
AS TO BLOOM SUCCESSIVELY.

BY J. M.

HAVING a few moments to spare from my daily avocations, I have drawn up a list of plants, such as I think most suitable for the plans which are inserted in the July cabinet, and I hope it will be of service to many of your readers; for I am sorry to say, there are but few flower gardens attended to as I should like to see them, viz. in flower most of the season.

I should recommend (which is not in my list) a few of the best annuals to be sown in pots or beds in the autumn, so as to be fit for transplanting into the beds that will be done flowering about the end of March, as there will not be many which will be in my list fit for planting out before the middle of May.

Some of your readers may think that I should have inserted many plants into my list that I have not, if there are any such, my advice to those individuals is, to introduce into their gardens whatever may tend to give their flower beds the best effect.

But I must say, that after four years studying and making lists of such plants as I thought most suitable, for prolonging the interesting scenery of a flower garden, that the following list will meet the object in view, viz. a display of plants which are in bloom most part of the season.

All the bulbs, except the Tulips, should remain in the ground and only be replanted every three or four years.

If my public assistance can be of any service to you at any time it is at your command, for I rejoice to see you adopting the system of giving plans, which is a new era in the Cabinet, and will, no doubt, be gratifying to many of your readers, and my worst wish for you is, go on and prosper.

J. M.

A List of Bulbs for flowering in the
Spring.

Scilla siberica
Scilla carnea
Scilla bifolia
Scilla bifolia alba

A List of Plants for flowering in the
Summer.

Verbena melindris latifolia
Verbena multifida
Verbena multifida alba
Nierembergia calycina.

A List of Bulbs for flowering in
the Spring.

Galanthus Nivalis plena
Narcissus minor
Erythronium Dens canis
Erythronium album
Crocus luteus
Crocus lagencefforus
Crocus Sabini
Crocus obvatus
Crocus albidus
Crocus elegans
Crocus leucorhyncus
Crocus spectabilis
Muscaria plena
Leucojum verra plena
 Double yellow Tulip
 Double red Tulip
Oculus solis Tulip
 Early single Tulip
Narcissus jonquilla
Narcissus angustifolia
Scilla non scripta alba
Scilla non scripta carnea
Anemone apennine
Anemone nemorosa plena
Anemone double scarlet
Anemone double crimson

A List of Plants for flowering in
the Summer.

Lobelia unidentata
Verbena radicans
Lobelia erinus
Tournefortia heliotropioides
Lotus jacobæus
Lobelia axilaris
Nirembergia gracilis
Verbena Tweediana
Verbena incisa.
Verbena Arranania
Anagallis grandiflora
Anagallis Philippii
Oenothera missourensis
Oenothera taraxifolia
 Pink nosegay *Geraniums*
 Scarlet nosegay *Geraniums*
 Frogmore scarlet do.
 Prince of Orange and Princess
 Charlotte do. to be mixed
Heliotropium peruvianum
Petunias of varieties
Calceolarias of varieties
Senecia elegans
Phlox Drummondii
Verbena venosa
Salvia chamædryoides
Alonsoa linarifolia

ARTICLE VI.

A LIST OF THE MOST SUPERB ROSES IN THE VARIED CLASSES.

SELECTED BY MR. CHARLES WOOD, MARESFIELD NURSERY, UCKFIELD,
SUSSEX.

CONSIDERING the difficulty which often occur to Amateurs in looking over an extensive catalogue of roses in order to select a few of the best in the different divisions, I have taken the liberty to annex an abridged list, of the best and most esteemed varieties which have proved to be the most distinct and remarkable in the different classes from which they are selected, sincerely hoping that it may be a guide, and prove acceptable to some of your numerous readers. I intend, with your per-

mission to forward you in spring the most approved varieties of China, Odorata, and Laurencia Roses which are considered the most worthy of cultivation.

An abridged List of Select Roses.

PORTLAND OR PERPETUAL.

Antinous, very fine cupped, dark crimson, partially spotted.
 Bernard, most magnificent rose colour.
 Claire de Chatelet, reddish purple, very fine.
 Couronne de Beranger, fine bright rose colour.
 De Trianon, fine light pink.
 D'Esquermes, large rose colour.
 Flon, compact bright rose-colour.
 Louis Philippe, dark purplish crimson, very large.
 Stanwell Perpetual, pale flesh colour.

HYBRID PERPETUALS.

Gloire de Guerrin, most splendid bright dazzling scarlet
 James Watt.
 Psyche, bright fiery vermillion, very fine.

FOUR SEASONS.

Blush, fine cupped scmi-double blush.
 Pink, bright pink.
 Scarlet, scarlet.
 White, expanded white.

ISLE DE BOURBON.

Armosa, splendid pink, cupped.
 Aristides, rose-colour, small.
 Augustine Lelieur, large pink, very fine.
 Du Bourg, large splendid pale blush.
 Gloire des Rosamènes, bright dazzling carmine.
 Julie de Loynnes, beautiful white, flowering in corymba.
 La Tendresse, cupped, delicate pale rose.
 Marshall Villars, fine purplish deep rose.
 Madame Désprés, splendid large lilac rose.
 Thérésita, bright rose colour,

NOISETTES.

Aimée Vibert, splendid pure white in immense clusters.

A' Buerre Frais, yellow, fading white.
 Boulogne, cupped, dark violet purple.
 Bicolor, blush and rose.
 Belle d'Esquermes, bright rose colour.
 Camellia rouge, fine red.
 Grandiflora or Lee's Noisette, fine large blush.
 Jaune Désprés, beautiful bronzy reddish nankin yellow, very
 changeable.
 Lamarque, pale sulphury straw colour.
 La Biche, very large blush.
 Rothanger.

MUSK ROSES.

Double New, very fine double yellowish white.
 Nepalensis Alba, double white.
 La Princesse de Nassau, splendid yellowish white.

MICROPHYLLA.

Alba Odorata, large whitish cream.
 Coccinea, bright scarlet rose colour.
 Hybrid Pourpre de Luxembourg.
 Nouveau Rouge.
 Rose Violacée.
 Violet Cramoisie.

BRACTEATA.

Maria Leonida, very double white tinged.
 New Macartney, single cream colour.

CLIMBING ROSES.

Sempervirens, Adelaide D'Orleans, splendid large cream
 colour.
 La Princesse Louise, beautiful blush.
 Banksian, Yellow, pure yellow, in immense clusters.
 White, splendid small pure white in immense
 clusters.
 Multiflora, Italian, semidouble bright pink.
 Laure Davoust, deep pink, changeable, very splen-
 did indeed.
 Russelliana.
 Ayrshire, Blush, fine large blush.
 Countess of Lieven, tinged white.

- Ayrshire, Dundee Rambler, white edged with rose.
 Myrrh scented, pinkish cream colour.
 Rose Angle.
 Variegated, shaded pink.
 Boursault, Blush, immense large blush, deeper coloured.
 Crimson or Amadis, splendid bright, velvety pur-
 plish crimson.
 New Hybrid Gracilis, bright purplish rose with
 curious foliage.
 Hybrid climbing, Félicité Perpetué.
 Well's White.
 Indica Major.
 The Garland.

SWEET BRIARS.

- Carnation.
 Double Pink, very splendid double compact pink.
 Double Yellow, pale straw colour.
 Rose Angle, pink

PROVINS ROSES OR GALLICAS.

- Aspasié, globular, fine blush.
 Adzit Le Couvreur, fine light purplish rose, spotted with
 white.
 Berlise, dark purplish crimson, with red spots.
 Belle de Fontenay, bright red, with pale edge.
 Bizarre, Marbré, marbled and mottled flesh-colour.
 Camaieu, lilac rose colour, delicately striped with white.
 Compte de Murinais, spotted slate colour.
 Cleliée, rosy deep blush, very large and very splendid.
 Despienne, very double, partially edged with rosy purple,
 compact, curled, curious pink blush.
 Duc d'Orleans Ponctué, bright rose colour, elegantly spotted.
 Fanny Parrisot, pale lilac blush.
 Fanny Essler, purple spotted with rose.
 Gloire de France, pencilled bright rose.
 Gonzalve, dark red.
 Hortense Beauharnais, light blush, rather spotted.
 Hersilie, very deep spotted rose colour.
 La Petite Duchesse, a very pretty small bright scarlet, flow-
 ering in clusters.

Lycoris, deep pink, spotted.

La Muskowa, one of the very darkest, most splendid velvety purple.

Madam Campan, bright rose colour, splendidly spotted with pure white.

Philippe Quatre.

Renonculle Ponctué, deep red ground, small double reconcullus shaped, and spotted with white.

Robert le Diable, compact bright rose colour.

Séphora, bright red rosy lilac.

Triomphe de Rennes, purplish crimson red.

Uniflore Marbrée, marbled rose, very fine.

Village Maid, splendid light purple ground, striped with lilac.

PROVENCE ROSES.

Adèle de Senânge.

Antoine d'Ormois.

Celestine, blush.

Double yellow, very fine large sulphur and yellow.

Des Pientres.

Duchesne, blush, very fine.

Fringed or crested Moss, large bright rose colour, with beautiful crested buds.

Indiana, large blush.

Unique Panaché pure white with rosy stripes, does not always come striped.

MOSS ROSES.

Crimson or Damask, fine crimson.

De la Fleche or Scarlet, purplish crimson.

Mouseuses Zoé, rose coloured leaves, and covered with moss.

Rouge de Luxembonrg, very deep rich crimson red, nearly purple.

White Bath, very pure white.

ROSA ALBA.

Belle Grise.

Blanche Fleur, very fine double blush white.

Deshouilliers, fine white globe.

Félicité Parmentier, most beautiful, very double curled, splendid light pink blush.

L'Ingenue, pure white, splendidly tinged with yellow.

Reines des Belges, a superb pure, very double white.

DAMASK ROSES.

La Ville de Bruxelles.

Madame Hardy, immense large pure white globe, very splendid indeed.

Philodamie.

Painted Damask or Leda, splendid creamy white, beautifully margined with purple.

Madame Feburier, fine large bright pink, occasionally flowering in the autumn.

HYBRID CHINA ROSES.

Anjou.

Adolphe Cachet, purplish red.

Ancelin, large lilac rose, very splendid.

Astarade, deep shaded violet purple

Athalin, bright showy pink, sometimes spotted with white.

Brenus, bright dazzling fiery red, carmine, immensely large, very splendid indeed.

Blanc, splendid pure white in immense clusters.

Becquet, very splendid dark rich purple.

Belle Marie, fine lilac, rosy blush.

Boila or La Nubienne, large globular light purple.

Bouquet Charmant, splendid pinkish blush.

Coupe d'Amour, small cupped, beautifully bright, pinkish rose colour.

Coutard, splendid bright rose colour.

Duke of Devonshire, rose colour, with lilac stripes, very large, does not always come striped.

Delaâge, rich purple.

Elizabeth Fry.

Fulgens or Malton, bright fiery dazzling vivid show scarlet.

La Tourterelle or Parni, dove colour, very beautiful.

Las Casas, very large most magnificent rose colour.

Las Casas D'Angers, rose.

Louis Phillipe 2d.

Moyenna, very pretty cherry colour violet.

Reine de Belgique, large rosy lilac, very fine.

Riego.

Saudeur panaché or king of Roses, most splendid rosy lilac, elegantly striped with white.

Triomphe de Guerrin, splendid pale rose colour.

Thurette, deep small double dark violet, reflexed and velvety, large rosy lilac.

ARTICLE VII.

REMARKS ON THE ROSE.

Continued from page 208.

Oriana when confined a prisoner in a lofty tower, threw a wet rose to her lover to express her grief and love; and in the floral language of the East, presenting a rose-bud with thorns and leaves, is understood to express both fear and hope; and when returned reversed, it signifies, that you must neither entertain fear or hope. If the thorns be taken off before it is returned, then it expresses you have every thing to hope; but if the leaves be striped off, it gives the receiver to understand that he has every thing to fear. The pronoun *I* is understood by inclining the flower to the right, and the pronoun *thou*, by inclining it to the left.

The poet Bonnefons sent to the object of his love a nosegay consisting of a white and a red rose, the one to indicate the paleness of his complexion, caused by anxiety, and the other by its carnation tint, was to express the flames of his heart.

The flower which Philostratus dedicated to Cupid is made to speak the language of love. We are told that some persons pass through life without feeling the arrows of the young god; and we read of others who could not endure the sight and smell of roses. Mary de Medicis, it is said, detested roses even in paintings, and the knight of Guise fainted at the sight of a rose. These strange aversions are unnatural, and the objects deserve our pity.

Man alone seems born sensible to the delights of perfumes, and employs them to give energy to his passions, for animals and insects in general shun them. The beetle is said to have such

an antipathy to roses, that the odour of this flower will cause its death; from which the ancients devised the allegory, to describe a man enervated by luxury, by representing him under the image of a beetle expiring surrounded by roses.

Madame de Genlis tells us that formerly the rose was so precious in France that in several parts of that country the inhabitants, were not allowed to cultivate it, as if all but the powerful were unworthy of such a gift; and at other times we find it mentioned among the ancient rights of manors, to levy a tax or tribute of so many bushels of roses, for the provision of rose-water for their lord, whose table was also covered with rose leaves instead of napkins. The French parliament had formerly a great day of ceremony, called "Baillée de Roses," because great quantities of roses were then distributed.

We presume that it was formerly more customary to use rose water, in this country than at present, as we find amongst the charges in the account of a dinner of Lord Leiyster, chancellor, of the university of Oxford, Sept. 5th, 1570: "For iij oz. of rose-watere, for boyld meats, and leaches, gelleys, and drie leaches, and marche payne, and to wash afore dinnere iij s. ix d."

Rose water is still in such demand in Damascus, for the purposes of cookery, that many hogsheads of it are sold daily in the markets of that city.

As we now possess upwards of eight hundred different kinds of Roses, it would be in vain to attempt the description of all the varieties and sub-varieties, which nothing short of the most minute inspection can discover, and the nicest pencil pourtray. To such of our readers as wish to see the roses pictured, we recommend them to inspect the work which Miss Lawrence has published in this country, and "Les Roses, par Redouté," published at Paris in three folio volumes.

Of the roses which are natives of these islands, the British Botanist of 1820, notice twenty belonging to England, four to Scotland, one to Ireland, and one to the Scilly Islands. These are made to form seven distinct species in the Hortus Kewensis, the most delightful of which is the sweet-brier, or eglantine, *Rosa, Rubiginosa* or *Eglanteria*

"By sweet-brier hedges, bath'd in dew,
——— Let me my wholesome path pursue." WHARTON.

"Come gentle air! and while the thickest bloom,
 Convey the jasmin's breath divine,
 Convey the woodbine's rich perfume,
 Nor spare the sweet-leaved eglantine." SHENSTONE.

It is noticed by Chaucer, as long back as the middle of the fourteenth century :

———— "The greene herber,
 With sycamore was set and eglaterre.

This species of rose is found in chalky or gravelly soils, on heaths or hedges in most parts of Europe ; but the size and fragrance of the leaf is greatly improved by cultivation, that has produced six varieties of this fragrant leaved brier, the most beautiful of which are the double-flowered and the double moss brier. It is hardly possible to scatter this shrub too thickly in the plantation, and when we pass hedges of this odorous thorny plant, after a spring shower, we feel not only delighted but refreshed by the fragrance.

The name of Eglantine, by which the sweet-leaved brier is known, is taken from the French *eglantier*. That we so often find French names given to our native plants is not singular, as after the conquest, French became the written language of this country for many centuries. The Greeks called all the wild roses or briars *Kunorodon*, because the root was thought to cure the bite of a mad dog, and the Latins for the same reason, named them *canina*, and from them we call one of our hedge briars, the Dog-rose.

It is the Dog-rose, *rosa Canina*, that decorates our hedge-rows with its tall arching branches and lively odorous flowers in the months of June and July. From the petals of this blush-coloured wild rose, a perfumed water may be distilled, which is thought to be more fragrant than that from garden roses. The leaves of this brier, when dried and infused in boiling water, are often used as a substitute for tea, and have a grateful smell and subastringent taste.

The fruit of this brier also forms one of the greatest beauties amongst the autumnal tints, being of a bright scarlet, perfectly smooth and glossy, and of an elegant oblong shape. This briar is often called the hip tree, from the name of the fruit.

(To be continued.)

R E V I E W .

The Rose Fanciers Manual.—By Mrs. Gore. 12mo, pp.434.
London, 1838.

In the preface, Mrs. Gore informs us that she has undertaken this work "for the use of the inexperienced English amateur; and, in order to make it practically available, scientific terms have been, as far as possible, laid aside, and the simplest form of language adopted." (p. vi.) In the remainder of the preface, we are informed that, though roses are easier of propagation in France they attain their highest perfection in England; in proof of which, reference is made to the nurseries of the principal English rose growers. The rose attains a larger size in England, from the comparative moderation and humidity in the climate; and the blossom of any individual kind of rose remains a longer time expanded in our cloudy atmosphere, than under the intense heat and light of a Continental sun, unobscured by clouds or mists.

"The real source of the eminence of the French in the culture of roses, is the fact that it absorbs the almost exclusive attention of their horticulturists. The high price of fuel places the cultivation of the tender exotics (by which English amateurs are chiefly engrossed) almost out of the question; and, as the French adhere to the wise custom of repairing to their country seats in May, and quitting them in December, their attention and money are appropriated to the improvement of such plants as adorn the flower-garden during the summer season. They care little for any that cannot be brought to perfection in the open air; and precisely the same motive which promotes the cultivation of the dahlia in England, has brought the rose to greater perfection in France.

"The first impulse was given to the culture of the rose in France at the commencement of the present century, under the auspices of the Empress Josephine, who caused her own name to be traced in the parterres at Malmaison with a plantation of the rarest roses, at a considerable expense, by Dupont, the gardener and founder of the celebrated collection attached to the Luxembourg palace.

"At the death of Dupont, Monsieur Hardy succeeded to his office; who for twenty-five years has been making annual sowings of seeds obtained from all quarters of the globe, with a view to the creation of varieties; and is probably the most scientific rose grower in Europe. The Chamber of Peers, however, and its grand referendary, by whom his services are remunerated, have lately rendered the rose school of the Luxembourg Nursery secondary to the school of vines; a matter of important national interest to the land-owners of France.

"The original roses of the Luxembourg, as well as those of the royal nursery at Trianon, are not purchaseable; but are given away to respectable applicants or exchanged for other plants with eminent nurserymen, by whom they are propagated and dispersed. In this way the *Rosa Hardii berberi folia*, obtained this year by the accidental impregnation of that remarkable

VOL. VI, No. 68.

BB

plant, the *Rosa simplicifolia*, or *R. monophylla* [Lowea *berberifolia* Lindl.] *R. microphylla* growing near it, has fallen into the hands of Cels, by whom it will be shortly placed in circulation.

"This especial dedication of the Luxembourg gardens to the cultivation of roses has done much towards their multiplication in France; while the Jardin des Plantes, under the able care of Neumann, as well as several provincial botanic gardens, have taken part in the cause. At Nantes, for instance, was produced a few years ago, from the accidental impregnation of a Macartney rose by a *Rosa indica odorata*, the beautiful *R. Maria Leonida*, now in general favour, which flowers in great perfection till the commencement of winter; while among the Paris nurserymen remarkable as rose-growers, Noisette has given his name to a most beautiful and prolific variety, obtained in the first instance from Charleston, in the United States, by his brother, Philip Noisette. Having amassed a considerable fortune, the Noisettes no longer continue to raise roses from seed; and this branch of cultivation is engrossed at Paris by Laffay, a most enthusiastic and intelligent gardener, and Vibert, who has written some valuable treatises on the culture of roses. Cels and Sisley-Vandael export largely to England; the latter excelling in the production of the *Rose Thé*, or scented China rose. Calvert and Prevost of Rouen also dispatched large collections to England; and Sedy and Plenty, at Lyons, have obtained many curious varieties. Boursault's celebrated collection has fallen to decay; while that of one of the first growers who attained much distinction, Descemet of St. Denis, was cut up by the English troops in 1814; when the horticulturist, unable to obtain indemnification from government, proceeded to Russia, and re-established himself with honour and success. [He has the management of the government garden at Nikitka in the Crimea.]

"In the royal rosary at Versailles, standards may be seen which have attained 18ft. in height, grafted with twenty different varieties of rose. The same branch of rose culture is practised with great success at Brussels and Diüsseldorf. In the imperial gardens at Monza, near Milan, thirty-nine varieties of China roses have been obtained by the late celebrated Villaresi; and Genoa, Marseilles, and Avignon have added to the number. At Lyons, much attention has been devoted to the culture of roses; and among other rarities now flourishing in their gardens, they have that beautiful miniature, the Lawrencean rose (which in England attains a height of between 2 and 6 inches).

"The numerous varieties of our native Scotch rose are in high estimation on the Continent, as well as many others obtained in England; such as the *R. Smithii*, a double yellow rose, obtained by the gardener of Lady Liverpool; the *George IV.*, obtained by Rivers, jun.; the *Stanwell perpetual*, an accidental hybrid, found in Mr. Lee's garden, at Stanwell; and many varieties of moss roses, the greater number of which beautiful family were obtained in England. The China or Bengal rose, sent to the Botanic garden at Kew about the year 1800. The *Rosa Banksiæ*, and that singular rose, *R. microphylla*, both natives of China, also reached the Continent by means of the botanists of England.

"There is not a more perplexing or more amusing branch of horticulture, than that of sowing with a view to the production of new varieties. Every season affords valuable acquisitions; and at the annual epoch of flowering, the excitement of the enthusiastic rose-grower is at its height. Laffay, for instance, has this season obtained a vigorous and very thorny variety of *Rosa Banksiæ*; which, should it fulfil his expectations, by producing, next summer, flowers of a vivid pink, will afford a highly valuable addition to the Banksian tribe.

"In addition to the interest excited by his seedlings, the attention of the rose-grower is eagerly directed to the accidental varieties produced by what is called 'a sport,' or branch losing the habit of the plant on which it grows, and assuming new specific characters. In this way the Bath moss rose, or

mossy unique, was originated at Clifton; and the beautiful *Rosa cristata* in Switzerland. The Rose unique was discovered at the commencement of the present century, in a cottager's garden, among a plantation of roses of the hundred leaved or cabbage, kind, which is peculiarly subject to sport, either from the excessive vigour or imperfect vegetation of the subject. The mossy rose de Meux, or pompon mosseux was discovered five and twenty years ago, in the garden of an old lady in the west of England, of whom it was purchased by a nurseryman for five guineas; certainly a sport, as the rose de Meaux is known never to bear seed in England. The Ayrshire roses were chiefly obtained from seed at Dundee, in Scotland. Brown's superb blush was raised at Slough, near Windsor; a seedling of the *Rosa indica odorata*, and the yellow sweet briar, at Pitmaston, by Mr. Williams. To enter into the origin of even the finer modern varieties would, however, be an endless task." (p. xiii.)

(TO BE CONTINUED.)

A Practical Treatise on Constructing and Heating Horticultural Buildings—By J. W. THOMPSON. Published by Groombridge, Panyer Alley, London.

This valuable Treatise being the production of a celebrated gardener of long experience, and of well known scientific and practical attainments as an horticulturist and landscape gardener, we think it a duty we owe to all horticulturists, whether amateur or gardener, to direct their attention to this little publication; no gentleman having a hothouse to manage or build, or to heat with hot water, or by any other mode of raising temperature, should be without this truly instructive work.

Thompson's observations are the result of long experience, and in our opinion the conclusions he has arrived at for the management of hothouses, &c., must accord with the views of every practical gardener. His observations relative to non-practical garden architects being consulted on horticultural erections, and his strenuously advocating the cause of every practical gardener interested in these subjects, should inspire in their breasts a feeling of gratitude, and induce them in return, to render him every assistance in their power by introducing his plan of boiler for heating with hot water.

We observe that the opinions of 'The Civil Engineer,' and 'The Mechanic's Magazine,' who have written on his plan of boiler, is in accordance with our own, and they fairly admit it to be the best and most economical system yet known for heating with hot-water.

We consider his conclusions at the end of the work, for the management of hothouses, &c., to be founded on sound philosophical, and practical reasoning.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE FLOWERS OF THE LUPINUS POLYPHYLLUS ALBUS DROPPING OFF, &c.—I have been struck with the falling off of the florets of the *Lupinus Polyphyllus albus*, (sometimes before they are fully expanded), and I have never had the satisfaction of growing it in the same perfection as the blue. I have had the opportunity of trying it in various situations in my garden, and in different kinds of soil, and the same thing occurs throughout this neighbourhood. I have remarked the circumstance for the last three years. Perhaps you, or some of your subscribers could explain it, and point out a remedy, by your attention to which, you will oblige

Your Obedient Servant, B.

Algburth, near Liverpool, July, 1838.

ON A LIST OF RHODODENDRONS, &c.—A Constant Subscriber would be much obliged by an article on the Rhododendron, including a list of the best sorts for general purposes, particulars of the growth, cultivation, and method of increasing.

Can Magnolias be best increased by budding, grafting, or layering? if by either of the former, what kind of stocks is most suitable? and at what period of the year is the operation to be performed? I have a fine variety of *M. laurifolia*, which I am desirous of increasing as soon as possible.

(The other queries sent by A Constant Subscriber, will be inserted next month—COND.)

REMARKS.

BIRMINGHAM DAHLIA SHOW.

Held on September, 12th, and 13th.

Great as was the public expectation, from what had been the current report of the beautiful display that might be expected from this annual exhibition, the result proved that the anticipations which had been raised, were fully realized. The company was very numerous and highly respectable.

THE PRIZES WERE AWARDED TO THE SUCCESSFUL COMPETITORS:
AS FOLLOWS.

Premier Prize, twenty-four blooms. Mr. Widnall, Grantchester, near Cambridge—Widnall's *No plus Ultra*, Duke of Devonshire, Rienzi, Cambridge Hero, Horatio, Conductor, Royal Standard, Suffolk Hero, Dodd's Mary Queen of Scots, Variabilis, Unique, Rhoda, Topaz, Lady Kinnaird, Glory of the West, St. Leonard's Rival, Ruby, Springfield Rival, Conqueror of Europe, Ovid, Eva, and Brown's Sarah.

Amateurs, twenty-four blooms. First prize.—Mr. Searle, Cambridge—Countess of Mansfield, Kingscote Rival, Rienzi, Widnall's Perfection.

Squibb's Purple Perfection, Conqueror of Europe, Knight's Victory, Sir H. Fletcher, Topaz, Ruby, Springfield Major, Rosa Elegans, Blandina, Etonia, Jeffrie's Triumphant, Suffolk Hero, Middlesex Rival, Sarah, Countess of Torrington, Beauty of Lullingstone, Dodd's Mary, Royal Standard, and Conductor.

Second Prize.—Mr. Hellier, Oxford—Middlesex Rival, Dodd's Mary, Sir H. Fletcher, Suffolk Hero, Stone's Yellow, Louthianum, Oxford Rival, Diadem of Flora, Knight's Victory, Beauty of Bedford, Topaz, Juliet, Springfield Rival, Glory of the West, Grand Duke, Day's Mary Anne, Blandina, Napoleon, Lady Kinnaird, Bontesholl, Ruby, Flower of Eden, Bronze, Pandora.

Third Prize.—Mr. Sadler, at Sir Charles Throgmorton's, Coughton Court—Rival Sussex, Smith's Lord Byron, Elphinstone's Purple Perfection, Sir Isaac Newton, Royal Standard, Clio Perfecta, Marquis of Lothian, Dodd's Mary, Hopwood's Lady Anne, Rosea Superba, Foster's Eva, Jeffrie's Triumphant, Ansell's Unique, Beauty of Lullingstone, Diadem of Flora, Marchioness of Tavistock, Knight's Victory, York and Lancaster, Doctor Halley, Girling's Horace, Rosetta, Middlesex Rival, Hermoine, and Melberry Rival.

Fourth Prize.—Mr. Mitchell, Lord Vernon's, Sudbury Hill, Derbyshire—Sir H. Fletcher, Dodd's Mary, Lady of the Lake, Lady Cowper, Hopwood's Lady Ann, Countess of Sheffield, Springfield Rival, Mount Pleasant Rival, Giraff, Jeffrie's Triumphant, Goliath, Lord Liverpool, Topaz, Sir Walter Scot, Cassina, Hermoine, Rival Sussex, Rhoda, Burgundy, Beauty of Berkshire, Brown's Sarah, Vandyke, and Wilmer's Superba.

Fifth Prize.—Mr. James Burberry, Stoneleigh—Kelsor's Etonia, Girling's Topaz, Kingstone's Nimrod, Sir Edward Sudgen, Brown's Beauty, Grant Thornburn, Suffolk Hero, Maria Edgeworth, Dodd's Mary, Sir H. Fletcher, Cambridge Hero, Brown's Sarah, Day's Oxford Rival, Lord Stanley, Sussex Rival, Ansell's Unique, Barrat's Stuart Wortley, Springfield Major, Clarke's Julia, Conqueror of Europe, Blandina, Calliope, Addison, Bowman's Premier.

Amateurs, twelve blooms. First Prize.—Mr. Searle—Knight's Victory, Squibb's Purple Perfection, Rhoda, Hope, Etonia, Royal Standard, Ruby, Jeffrie's Triumphant, Topaz, Suffolk Hero, Conductor, and Countess of Torrington.

Second Prize.—Mr. Foreman, Chellaston—Topaz, Marquis of Lothian, Summum Bonum, Knight's Victory, Dodd's Mary, Pandora, Brown's Beauty, Bontisholl, Jubilee, Summend's Alpha, Lord Lyndhurst and Royal Standard.

Third Prize.—Mr. J. Barbury, Stoneleigh—Sussex Rival, Marquis of Lothian, Whale's Royal Standard, Dodd's Mary, Foster's Eva, Cambridge Hero, Conqueror of Europe, Widnall's Duke of Devonshire, Girling's Topaz, Widnall's Conductor, Maria Edgeworth, and Clark's Julia.

Fourth Prize.—Mr. J. Mussell, Mr. C. Retheram's gardener—Purple Perfection, Corrinne, Springfield, Duke of Devonshire, Dodd's Mary, Suffolk Hero, Squibb's Purple Perfection, Brown's Beauty, Sir H. Fletcher, Conqueror of Europe, Marquis of Lothian, and Dodd's Mary Queen of Scots.

Fifth Prize.—Mr. Thomas Tayler, Hinckley—Sir H. Fletcher, Dodd's Mary, Unknown, Rival Suffolk, Addison, Blandina, Perfection, Springfield Rival, Suffolk Hero, Perfection, Glory of the West, and Ruby.

Sixth Prize.—Mr. Hellier—Ruby, Napoleon, Springfield Rival, Mrs. Broadwood, Sir H. Fletcher, Dodd's Mary, Oxford Rival, Sam Weller, Allman's Grand Duke, Bath Rival, Day's Mary Anne, and Suffolk Hero.

Amateurs, six blooms. First Prize.—Mr. Searle—Suffolk Hero, Blandins, Knight's Victory, Topaz, Royal Standard, and Dodd's Mary,

Second Prize.—Mr. Hellier—Clio Perfecta, Suffolk Hero, Dodd's Mary, Sir H. Fletcher, Oxford Rival, and Beauty of the Grove.

Third Prize.—Rev. Mr. Cresswell, Radford, near Nottingham—Pandora, Bontisholl, Glory of the West, Beaumont's Premier, Royal Standard, and Suffolk Hero.

Fourth Prize.—Mr. Henney, Wolverhampton—Marquis of Lothian Suffolk Hero, Sir H. Fletcher, Independent, Middlesex Rival, and Brown's Beauty.

Fifth Prize.—Rev. Frederick Smith, Elmhurst—Dodd's Mary, Napoleon, Fisherton Rival, Springfield Rival, Topaz, and Conqueror of Europe.

Sixth Prize.—Mr. Mussell—Dodd's Mary, Topaz, Marquis of Lothian, Suffolk Hero, Foster's Hero, and Etonian.

Nurserymen, twenty four blooms. First Prize.—Premier Cup, Mr. Widnall, as above.

Second Prize—Mr. Brown, Slough—Royal Standard, Suffolk Hero, Topaz, Squibb's Purple Perfection, Conqueror of Europe, Jeffrie's Triumphant, Beauty of Berks, Maria Edgworth, Hope, Mrs. Wilkinson, Hero of Navarino, Metropolitan Yellow, Unique, Conductor, Eva, Marquis of Lothian, Dodd's Mary, Bontisholl, Robert Burns, Lady Kinnaird, Rienzi, Premier, Springfield Rival, and Rival Sussex.

Third Prize.—Mr. Hodges, Cheltenham—Dodd's Mary, Widnall's Conductor, Widnall's Duke of Devonshire, Royal Standard, Wale's Beauty of West Riding, Hope, Stamford's Perfection, Clio Perfecta, Rival Granta, Topaz, Springfield Major, Lady Dartmouth, Warminster Rival, Suffolk Hero, Boadicia Cormack's, Widnall's Rienzi, Rival Sussex, Widnall's Perfection, Foster's Eva, Girling's Ruby, 'Springfield Rival, Girling's Exquisite, Knight's Victory, and Ansell's Unique.

Fourth Prize.—Mr. Bates—Knight's Victory, Dodd's Mary, Marquis of Lothian, Countess of Torrington, Springfield Major, Foster's Eva, Duke of Rutland, Clio Perfecta, Squibb's Purple Perfection, Oxford Rival, Elphinstone's Purple Perfection, Ansell's Unique, Macket's Hellena, Suffolk Hero, Widnall's Livinia, Carmine Perfection, Jeffrie's Triumphant, Glory of the West, Ruby, Lady Vernon, Blandonia, Marquis of Northampton, Pandora, and Sir H. Fletcher.

Fifth Prize.—Messrs. Mountjoy and Son, Ealing, Middlesex—Sir F. Burdett, Springfield Major, Ne plus Ultra, Middlesex Rival, Ovid, Bontisholl, Clio Perfecta, Essex Rival, Sylvia, Jeffrie's Triumphant, Perfection, Squibb's Purple Perfection, Grant Thornburn, Springfield Rival, Dodd's Mary, Exquisite, Unique, Independant, Dodd's Queen of Scot's, Harwood's Defiance, St. Leonard's Rival, Ruby, Conductor, and Rival Sussex.

Nurserymen's, twelve blooms. First Prize.—Mr. Widnall—Widnall's Rienzi, Widnall's Conductor, Eva, Springfield Rival, Suffolk Hero, Topaz, Dodd's Mary, Ruby, Unique, Lady Kinnaird, Brown's Sarah, and Marquis of Lothian.

Second Prize.—Mr. Brown, Slough—Middlesex Rival, Conqueror of Europe, Rienzi, Beauty of Berks, Bontisholl, Unique, Oxford Rival, Lady Kinnaird, Bowling-green Rival, Eva, Topaz, and Sir H. Fletcher.

Third Prize.—Mr. Earl, Bristol road, Birmingham—Barratt's Hero of Wakefield, Barratt's Honourable Stewart Wortley, Beauty of Kingscote, Dodd's Mary, Widnall's Reliance, Widnall's Conductor, Springfield Rival, Brown's Corinna, Maria Edgworth, Widnall's Duke of Devonshire, Middlesex Rival, and Conqueror of Europe.

Fourth Prize,—Messrs. Mountjoy, and Son, Ealing,—Summum Bonum, Dodd's Mary, Middlesex Rival, Metropolitan Yellow, Jeffrie's Triumphant, Springfield Rival, Ansell's Unique, Bottisholl, Lord Byron, Addison and Ruby.

Fifth Prize—Mr. Wilmer, Sunbury, Middlesex,—Topaz, Heal's Glory, Dodd's Mary, Springfield Rival, Clio Perfecta, Widnall's Duke of Devonshire, Grant Thornburn, Holman's Scarlet Perfection, Bowman's Premier, Hope or Metropolitan Rose, Foster's Eva, and Riensi.

Seedlings. First Prize—Cup, Mr. Smith, Worcester.

Second Prize—Mr. Widnall.

Third Prize—Mr. Willmer.

Fourth Prize—Messrs. Brown, of Slough.

Fifth Prize—Mr. Widnall.

Sixth Prize—Mr. Willmer.

LIST OF NEW AND RARE PLANTS.

HYDROTANIA MELEAGRIS—From Mexico. It has the appearance of a *Tigridia* bearing the flower of a *Frittilary*; the flower stem rises half a yard high, and the spathe contains four or five flowers, which are exceedingly fugitive, and extremely delicate, so as to scarcely bear touching, but being immersed in spirits of wine become tough, and like fine parchment; it has bloomed in the collection of John Rogers, Esq. Jun., Seven Oaks, Kent.

CYNOGLOSSUM GRANDIFLORUM—Seeds of which were sent from Bombay; it is an herbaceous plant, growing a yard high, producing upon the branching stems racemes of fine bright blue flowers edged with white, having a very pretty appearance.

MORRENIA ODORATA—From Buenos Ayres; in the greenhouse it blooms from July to September, it is a twining plant, the flowers having a resemblance to, and fragrance of *Perguluria odoratissima*; it has been introduced by the Hon. W. F. Strangeways.

CALYSTEGIA SEPNUM—From New Holland. Very much like the common large flowered Bindweed of this country, only the flowers are pink and somewhat larger; it has bloomed in the garden of the London Horticultural Society.

REPERIA AURANTIACA—From New Holland. The flowers are rather small, of an orange yellow colour; it has been in bloom in the open border (in the garden of the London Horticultural Society) since the commencement of July.

PSORALEA CINEREA—An annual from New Holland. The flowers are rather small, of a purplish colour, not very interesting.

PIMELEA CRINITA—From Swan River Colony. It has recently bloomed in the fine collection of Robert Mangles, Esq., Sunning Hill, Berks; the flowers are white, having something of the fragrance of the *Heliotropium*.

CAMPANULA CARPATICA ALBA. The well known showy blue flowered species, has now a rival in a white flowered hybrid, and when grown in contrast, would have a fine effect in the flower bed; every flower garden ought to have both kinds, and only growing from one to two feet high; it is recommended for any situation however exposed.

PENTSTEMON ANTWERPENSIS.—The whole plant in its foliage, spikes of flowers, &c., have much the resemblance of *P. barbatus*, (Synonym *Chelone barbata*) excepting the difference in colour of the blossoms, which in this new species are of a cream colour tinged with pale rose, and have a delicate appearance. There is also a variety with pure white blossoms of *P. barbatus* in flower at Mr. Young's, Epsom Nursery.

REFERENCE TO PLATE.

LELUM SPECIOSUM. This very splendid flowering species was introduced into this country from Japan by Dr. Siebold. It is not only handsome on account of its clear deep rose coloured flowers which seem all rugged with rubies and garnets, and sparkling with crystal points, but has a very delightful fragrance. Kämpfer said, when speaking of its excellence, that "it is magnificent in beauty."

The plant will flourish well if kept from the severity of winter, either in a cold pit or greenhouse. During the present summer we have seen splendid specimens growing in the open border in good situations. The finest we saw was in the conservatory of Messrs. Loddiges's. The flower stem rises from three to five feet high. It likes a light and rich loamy soil.

PENSTEMON HETEROPHYLLUM, various leaved. The late Mr. Douglass sent this pretty species from California. It is perfectly hardy and blooms from May to October. It has a somewhat shrubby appearance, and blooming so profusely has a very pretty effect. It deserves a place in every flower garden.

LOPHOSPERMUM SCANDENS. This is the proper species of that name, and not the *L. erubescens* which has adorned our gardens, &c. for the last seven years. The present species was introduced into this country in 1837. The plant is a profuse bloomer, and when grown in the open border, makes a pretty bush about half a yard high. It also blooms profusely when trained. The flowers are not of so bright a colour as the *L. erubescens*, but nevertheless showy.

FLORICULTURAL CALENDAR FOR OCTOBER.

PLANT STOVE—Plants of Cactuses that have been kept in the open air or greenhouse, now put into the stove, will bloom immediately.

GREENHOUSE-PLANTS.—Those plants that were removed into the greenhouse last month, should have plenty of air given them every mild day; but the lights should be close shut up at night, also when cold, damp, wet, or other bad weather prevails, excepting a little at the doors about the middle of the day. The plants should not be watered in the broad-cast manner, as it is termed, but should be attended to singly, so that no plant may be watered, but what is actually dry. To water in the evening is detrimental to the plants and ought to be avoided. Camellias, if wanted to flower early, should now be placed in a stove.

FLOWER GARDEN, &c.—Auriculas must now be removed to their winter quarters and all dead leaves picked off. Carnation layers potted off should be placed for protection during winter. Offsets of the herbaceous kinds of Calceolarias in beds or borders, should now be potted off. Cuttings of all greenhouse plants that have been grown in the open border, in beds, &c. such as Heliotropes, Geraniums, shrubby Calceolarias, should be taken off as early as possible in the month, and be struck in heat, in order to have a supply of beds, &c. the next year. Hyacinths and other bulbs, should be potted early in the month for forcing. Seeds of Schizanthus, Stocks, Salpiglossis, and similar kinds of plants wanted to bloom early next season, should be sown the first week in the month in pots, and be kept from frost during winter. Perennial and biennial flowers may be divided, and planted off where intended to bloom next year. A cover of soil round the roots should be given to Dahlias, lest a sudden frost coming should injure the crown buds. Seeds of all kinds of flowers not yet gathered, should be collected early in the month or they will be liable to injury by frost.

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Gladiolus var. *Queen Victoria*



G. var. picta blandus



G. var. Venus



G. var. Victoria

THE
FLORICULTURAL CABINET,

NOVEMBER, 1st, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF THE DAHLIA.

BY A DAHLIA GROWER.

No flower is in so universal estimation as the Dahlia, and whether we view its pure masses of varied foliage, the majestic mien of the plant, the size and symmetry of its flowers, or the brilliant and infinite variety of its splendid colours, as exemplified in the multitudinous varieties of it in cultivation, we cannot but acknowledge that it is richly worthy the esteem it has so fairly won from the British Floriculturist. In the neat little garden of the peasant or the gay parterre of the rich, it finds a hearty welcome. Even the stupid inattentive mortals that walk on mother earth unmindful of her beauties and unmoved by all her rich garniture, tell us the Dahlia is a beautiful flower. Never for any other plant have we heard of £100 being subscribed for distribution of prizes as at Birmingham this season, to reward the best cultivators of this star of the earth. Who that can look with complacency on the Sun-flower, the Marigold, or China-aster, the favourites of our ancestors, will not rise into raptures at the sight of the best varieties of the Dahlia.

But the object of this lucubration is not merely to laud the flower I so much admire, or sing its praises however justly they

Vol. VI. No. 69.

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they may be due, but to notice some particulars necessary to be attended to in the cultivation of this national favourite. I have been stimulated to send you this communication by the reflection that any thing however trifling that would tend to improve the cultivation of the Dahlia, would find a ready acceptance both with you and your numerous readers.

I wish, then, to direct the attention of your subscribers to a particular disease incident to the Dahlia and other plants, at the same time allow me to say, that were gardeners to pay more attention to the pathology of plants, sending you accounts of the causes and cures of the various diseases happening to these objects of their care, there would be fewer disappointments and greater perfection attained. In heavy soils the Dahlia is occasionally subject to the disease generally called "curl," the infant leaves as they are unfolded, are perforated with numerous holes, the margins of which are brownish as if burnt, they then become rigid, curled, and succulent, and the whole plant unhealthy and dwarfish. The principal stem almost ceases to increase in height, and numerous suckers and lateral branches rise from below, forming a dense bush, the summits of these growths, in their turn, also become diseased. The flowers of such plants, as might be expected, are small, irregular, and unsymmetrical, and however excellent the variety may be, they yield nothing but disappointment to the anxiously expectant cultivator. Kings and queens, dukes and lords, and the numerous gentry that show off their splendors in the Dahlia ground, will put on a mean ragged and most plebeian aspect, conferring no honour either on the cultivator, or the personages they represent. I have, for several years, been puzzled as to the cause of this disease. Loudon has afforded me no hint in his Cyclopædia, Paxton's Treatise on the Dahlia I have not seen, and as the complaint has become very general in this neighbourhood during the present season, I have attended more particularly to the disease. I find it to be occasioned by an insect, the *Cymix chloroterus* or green bug of Linnaeus; a transparent winged insect, about one-fourth of an inch in length, with a large proboscis generally folded under the thorax. It inhabits the extremities of the Dahlia, grows and feeds upon the under surface of the unexpanded and infantine leaves, thrusting down its long proboscis amongst those which are most tender; I find the same insect committing similar devastation on a variety of other plants the *Potentilla formosa*, *atrasanguinea*, and

Russeliana Althea rosea, even the herbs *Mentha viride*, and *Melissa officinalis* have not escaped its ravages. I have also caught it on terminal shoots of some species of *Prunus*. The same insect produces the curl in the potatoe, about the cause of which, so many volumes have been ignorantly and erroneously written. These insects are never numerous, two or three on one plant are amply sufficient to blast the hopes of the cultivator either of the Dahlia or any other of the numerous plants it infests. The best remedy, in my opinion for the above evil, is to look over the plants attentively every morning for a week and pick off the insects, if any are to be found. In doing which it is necessary to be careful, as the insect when disturbed by the approach of an enemy, instinctively throws itself down among the leaves and lower branches, and if again disturbed it precipitates itself to the ground. If it escapes the hands of the destroyer, it again climbs the stem or branch to its summit, and again commences its mischievous depredations: so that it is necessary for the gardener to exercise some tact, or he will fail in capturing his enemy. The insect in its pupa state, is without wings, and in both states it is exactly the colour of the foliage of the plant.

Several other insects inhabit the Dahlia in wet seasons, a small species of acarius infests the flowers. The *Cicoda spumaria* is not unfrequent on the Dahlia, in its pupa state it feeds upon the juices of the plant, and produces those frothy appearances vulgarly called cuckoo spit; the perfect insect is about the size of *Cymex*, from which, however, it may be easily distinguished by its brownish hue. A species of *aphis* is also common on the Dahlia covering the young shoots and sucking the juices of the plant through the pores of the epidermis; they may be distinguished from the *Cymex* by their being smaller, more numerous, and more sluggish in their habits.

The other insects that inhabit the Dahlia, I may perhaps, notice in a future communication; but of all the insects that infest it, by far the most injurious is the *Cymex*, and I would advise your readers, who, doubtless are all Dahlia growers, and wish to grow it well, to be particularly on their guard against the attacks of this insidious and destructive enemy.

A CULTIVATOR OF THE DAHLIA.

Todmorden, Sept. 14th 1838.

ARTICLE II.

ON FACILITATING THE GERMINATION OF SEEDS.

BY ANICUS.

IODINE facilitates the germination of seeds much more than chlorine, if they be watered with a solution of it: even those which have apparently lost all vital power, may be frequently made to germinate by Iodine.—Sharon Turner's *Sacred History of the World*, Vol. I. p. 106, (might not this be useful with foreign seeds? Any chemist could give information as to the proper solution of Iodine for the purpose.)

The same work Vol. I. p. 108-9, mentions the following products, of foreign countries. Could any of them be naturalized in Great Britain? or if not there, in any of her colonies, so as to form articles of profitable commerce?

The *Myrica Pensylvanica* yields an annual supply of vegetable wax. M. Serret mentions it as a small arbuste, which may be easily cultivated in poor soils. From a surface of three hundred and fifty square feet he obtained every year from a pound and an half to two pounds of wax. Bull. Univ. 1829, p. 172. Humboldt also mentions a palm, the trunk of which was covered with a vegetable wax, which the natives employed for their tapers.

The Palo de Vaca in South America (gives a copious emission of actual milk. Humboldt found this tree in Venezuela. Lockhart met with many in Carraccas. One was an hundred feet high and seven in diameter. The milk was agreeable, and used by the inhabitants. Smith saw it on the river Demerary. It was there called *Hya Hya*. The milk was drinkable and rich; thicker than that of cows. It was not bitter, but a little viscuous, and mixed with coffee, it could not be distinguished with animal milk. Bull. Univ. 1830, p. 125, 295. Humboldt describes it as a handsome tree, resembling the broad leaved star-apple. Upon making incisions in the trunk, a glutinous milk issues abundantly of a pleasing and balmy smell, and it flows most copiously at sun-rise. It seemed peculiar to the Cordilleras of the coast.

Another tree in Guayaquil produces a fine wool. Ceibo wool is the product of a very high and tufted tree. The wool is contained in a pod near two inches long and an inch thick. It is a tuft like cotton, softer to the touch and of a reddish cast. Its filaments

are so fine that the natives think that it cannot be spun, and only use it to fill mattresses. Ulloa's Voyage to New Spain.

One in China secretes a tallow, like animal fat. This has lately been introduced into the Mauritius, and successfully cultivated. The tallow obtained from it is stated to be equal to that which is obtained from the fat of animals.

Mr. Ward exhibited to the Linnæan Society, a portion of the Lace-bark Tree of Jamaica (*Lagetta lintearia* of Jussieu). The tree grows on the high rocky hills of Jamaica, to the height of twenty feet: the bark is thick, and may be separated into twenty or thirty laminae, white and like gauze. Caps, ruffles, &c. have been made out of this. Lit. Gaz. No. 791, March 17th 1831.

The *Tillandsia* of Buenos Ayres, yields on incision, a copious quantity of pure water, so good, that the woodmen in the forests never take any with them. They perforate the plant near the root, and the water gushes out as clear as crystal. From the fullest plants, about two quarts may be obtained. Andrew's Journey. This last might, perhaps, be introduced with advantage in climates resembling its own, and situations where water is not abundant. It is regretted that the references to the books quoted by Mr. Turner are so much abbreviated, and that the transcribers cannot add to them, any bookseller on a large scale, or other persons conversant with scientific works, would at once recognize those named.

AMICUS.

October 24th 1838.

ARTICLE III.

ON THE CULTURE OF THE HYACINTH IN BEDS OR POTS.

BY H. L. ISLINGTON.

I HASTEN to fulfil my promise by rendering an account of the method observed by many amateurs and florists in cultivating Hyacinths in beds and pots, and which is adopted by me as being the most preferable. The observations I am about to offer thereon, should be as succinct as the subject admits, and be strictly confined to practical results, for mere theoretical statements in this, as in nearly all other matters, bewilder rather than instruct. Being an enthusiastic admirer of the flower, I have taken no ordi-

nary pains to produce a good bloom, and can, therefore, the more confidently suggest a few hints respecting the culture of it. It has always appeared to me, as well as to many with whom I have conversed upon the subject, to be a matter of regret that comparatively so little attention should be bestowed on this flower: the Tulip has numerous fanciers, and so have Carnations and Auriculas, whilst the Hyacinth, though not inferior in beauty seems as to blooming it in beds to be too generally neglected, and yet a more beautiful object amongst all those which attract the eye in a flower garden is rarely seen, the effect produced by a glance at an assemblage of so beautiful a flower, especially when well arranged, is dazzling, and a close inspection will be found to increase the gratification derived therefrom, added to which the fragrance emitted by them is peculiarly sweet, and is not surpassed by the Mignonette or the Tuberose.

The most eligible part of a garden for a bed is that with a southern aspect, and considerably distant from trees and large shrubs, as the droppings to which plants beneath are subjected, prove extremely prejudicial; the season for planting is during this and the following month, the precise time being indicated by the appearance of the root itself, which I noticed in my remarks that were inserted in the last Number, a repetition of it therefore is unnecessary. The portion appropriated should be excavated to the depth of about two feet, the earth at the bottom loosened and rendered fine to about six inches deeper, and then raked smooth, this process will take but little time, and may be attended with advantage, the hollow should then be filled with the following compost; one-third of good garden earth, one-third of sea or river sand, as coarse as can be obtained; one-fourth rotten dung, about three years old: and the remainder vegetable mould.

The earth used in the compost will require minute examination, in order that vermin may be exterminated, of which the most destructive, and the most likely to elude detection, is the yellow wire-worm.

When preparing the compost, let its several parts be well mixed, this should be performed, a few weeks before it is needed, and will require turning over several times. After the bed is filled up add more compost till it is raised three or four inches above the walk in front, and let the height of the back part be an additional six inches, so as to form a slope to the south, a layer of sea or river sand, one inch thick, should be spread over the sur-

face, and if a tasteful arrangement be desired, the place for each bulb should be marked thereon, the following order appears the most natural, and has decidedly the best effect. Let the rows be six in number, and eight inches apart, and allow the same distance between the bulbs, and four inches from the four outer rows to the limits of the bed. On the layer of sand in the places appropriated to them, let the bulbs stand in the following position throughout; red, blue, white, red, &c. commencing with a red in the first row, and in the second with a white, which place under a supposed point equi-distant from the red and blue above it; the next root will consequently be a red, and under the point between the blue and the white; in the third row begin with a red as in the first, and let it be directly under the red, in that row the blue following it, will be beneath the white and red of the second row; the fourth row will commence with a white as the second, and be directly under it; the red in the next place will be under the blue and white of the third row, &c. This mode allows the greatest possible diversity, and each bulb except the outer ones will be in the centre of a hexagon. In this arrangement yellow Hyacinths may be considered as white. Then cover them with a mixture of fresh earth and sand three or four inches deep, the latter depth is the proper one for the earlier roots, as it will retard their progress, so as to bloom with the later ones, an attention to this is requisite to ensure all blooming together. When covered the bed will be completed, and if boarded on the sides, will add much to the neatness of it, or if preferred, brick-work may be substituted, and hoops placed over the beds, will be useful, as mats can be thrown over the beds, during severe frosts or heavy rains, but for slight frosts, as the Hyacinth is hardy, no covering is necessary, and rain when not violent, is beneficial; the autumnal rains are, except in very dry seasons, sufficiently copious to obviate the necessity of artificial watering.

A few bulbs or reserves should be planted in pots at the proper time, and plunged in order to supply deficiencies that may occur; for some bulbs whose appearance indicate no symptoms of decay, are rotten at heart.

As all the directions to be observed in planting has been enumerated, it is unnecessary to add more now; I shall, however, in the next, or in the January Number, resume the subject, and a few words on blooming Hyacinths in pots, shall close this article.

If it be intended to have the pots in the drawing room, it need only be observed, that an attention to watering them as often as is necessary to retain the moisture, and their preservation from severe frosts, is all that is required; but if for growing out of doors, it will be proper to plunge them, and this may be done in the ordinary way, by placing the roots three or four inches asunder, then filling up the interval between, and afterwards covering them from six inches to a foot until the return of spring, but the greatest care must be previously taken to examine the earth otherwise though but a single wire worm, or other noxious vermin remains, the roots are in jeopardy. Or another and much safer method may be adopted, instead of earth, let cinder ashes be substituted in its stead, they can be purchased of the sweeps for 3d. per bushel: place the pots on layers of these six inches thick, fill up the space between, and cover them as mentioned above; by this means no insect can approach the pot, so that if the compost in which the bulbs are planted be free from them, no injury need be apprehended; they will now be safely lodged in their winter quarters, and I shall not omit to refer to them in my next communication.

In the above remarks I have endeavoured to be explicit, and I hope the prolixity of them will not be objectionable. As also in my paper of blooming Hyacinths in glasses in the last Number of the Floricultural Cabinet, no direction is given that has not been subjected to the test of practice, as no doubt yourself and many of your readers can avouch.

H. L.

ARTICLE IV.

A LIST OF TULIPS SUITED TO GROW FOR SHOWING AT FLORAL EXHIBITIONS.

BY MR. JOHN SLATER, BROUGHTON, NEAR MANCHESTER.

HAVING been applied to by several of your readers for a list of Tulips calculated for an exhibition, I send you a catalogue of those grown here for that purpose.

JOHN SLATER,

N. B. Those tied together by a brace is considered the same.

Roses.

Dolittle, or }
 Michael de Lise }
 Blanca or }
 Rose Blanca }
 Claudianus
 Compte de Vergennes
 Hero of the Nile
 La Vandikken
 Lady Crewe
 Ponceau Brilliant }
 Moore's Rose, or }
 Cerise Royal }
 Pretiosa or }
 Thunderbolt }
 Queen Boadicea or }
 Duchess of Newcastle }
 Roi de Cerise
 Rose Quarto
 Unique
 Vesta
 Triomphe Royale or }
 Heroine }
 Thalestris
 Turner's Lord Hill
 Vulcan or }
 Crassimi }
 Wallworth

Bizarres

Albion
 Black Prince
 Captain White
 San Joe or }
 Abercromby. }
 Catafalque (Old Dutch)
 superieure
 surpasse
 Cato
 Charbonnier Noix
 Charles X.
 Coggeshall Hero
 Crown Prince
 Duc de Savoy
 Earl St. Vincent
 Firebrand
 Vol. VI. No. 69.

George IV. (Page's)

Gould Beurs
 Gould Mont
 Leopoldina
 La Cantique
 Lustre de Beauté
 Liberty
 Polyphemus
 Platoff
 Surpasse la Cantique
 Sir Sidney Smith }
 Magnum Bonum }
 or Thebisonde }
 Trafalgar

Byblomens.

Alexander Magnus
 Ambassador van Holland
 Archduke Charles
 Archelaus
 Atlas or }
 Bacchus No 1. }
 Black Baquet
 Bienfait
 Buckley's Smiling Beauty
 Lancashire Hero
 Fair Flora
 Cleopatra
 David or }
 David Pourpre }
 Duchess of Tuscany
 Grotius,
 Gadsby's Magnificent.
 Imperatrix Florum
 Imperatrice de Morocq
 de Romaine
 Incomparable, (Rowbottoms)
 Premier Noble
 Surpassant
 Louis XVI.
 Maître Partout
 Prince Wirtenberg
 Princess Charlotte
 Queen Charlotte
 Reine de Sheba
 Sable Rex
 DD

Sang du Bœut
Triumph de Lisle
Violet Alexander
..... a son Noir
..... Extra
..... Wallers
Washington

Sels.

Roi Min d'or
White Flag

Rose Breeders.

Duchess of Newcastle
Lady Crewe

Glaphyra

Bizarre Breeders.

Old Dutch Catafalque
Cato
Charbonnier Noir
Polyphemus

Byblomen.

Lancashire Hero
Smiling Beauty
Violet Alexander
Amy Robsart

New varieties exhibited this year.—Sir Thomas, Bizarre, won four premier Prizes this year; Lady of the Lake, Byblomen, like Roi de Siam; Sancta Sophia, Byblomen, like violet Alexander; Hannibal, Flamed Bizarre; Euclid, Feathered Bizarre, &c. &c. &c.

ARTICLE V.

REMARKS ON THE ROSE.

(Continued from page 232.)

MANY persons eat this fruit with pleasure when mellowed by the frost. It was formerly much used as a conserve, the seeds being taken out, and the pulp beaten with sugar. Gerrard says, "The fruit when it is ripe, maketh most pleasant meates, and banketting dishes, as tartes, and such like."

The fruit of the rose is nothing more than fleshy urceolate calyx, from whence the stigma springs, and it afterwards becomes the repository of the true fruit or seed, after the manner of the fig, excepting that the seeds of the hip, are divided by silky bristles, or prickly fibres, which cause great irritation on the primæ viæ when eaten.

It is the strong shoots of this species of rose-tree that the largest kind of garden roses are now grafted on; and by this means

we see, instead of bushes, tall stems growing out a-head, in imitation of the forest trees. Where it is desirable to raise them to a height above dwarf bushes, it has a good effect; as also when planted in flower gardens, as pinks and other flowers may cover the ground with blossoms, whilst the rose form a kind of parasol over them; but in general we prefer a rose bush to a tree of roses, and are better pleased to look into a rose than up to it. De-lille notices this modern practice with that of keeping apple trees in a dwarf state.

"Of old the rose on lowly bramble sprung,
While high in air the ruddy apple hung!
Now, strange reverse! the rose-tree fills the skies,
While scarce from earth our apple trees arise."

The white field rose, *Rosa arvensis*, is commonly called the White Dog-rose. This is much less fragrant than the last mentioned. As the fruit of this kind ripens, it changes from an ob-long into a globose shape. The style of the flower, as soon as they have passed through the neck of the calyx, are compacted into a cylinder, resembling a single style, terminated by a knob composed of the stigmas, which distinguish it from the other species. It is said to be the most common rose in the west of Yorkshire, and is generally mentioned as the rebel rose.

A young English lady appearing in company in Paris, with a sprig of orange flowers in her bosom, was thus complimented by a Frenchman for the clearness of her complexion, at the same time, that he gave her a delicate hint that her bosom was more exposed than modesty allowed.

"Lovely Tory, why the jest,
Of wearing orange in thy breast?
Since this breast so clearly shows
The whiteness of the rebel rose."

That both the white and the red rose were formerly considered rebellious emblems, the blood of our ancestors has fully proved.

"And here I prophesy—This brawl to day
Grown to this faction, in the Temple garden,
Shall send, between the red rose and the white,
A thousand souls to death and deadly night."

SHAKESPEARE.

The idea of taking a white or a red rose, as an ensign for the parties who caused such dreadful devastation in this country for many ages, seems to have originated in the Temple Gardens of London, (if we may trust to poetical history, that says in King Henry the Sixth,

“ Within the Temple hall we were too loud ;
The garden here is more convenient

From the year 1454, until the families were united in 1485, civil war laid waste the fairest portion of our country, and the sons of one father often engaged in battle, and sometimes the father against the son, under the different banners of the red and white rose.

In times of terror, fear and superstition are generally seen hand in hand. During these ages of domestic wars, we are told they discovered a rose tree at Longleat, which bore white flowers on one side and red ones on the other side, prognosticating both the division and uniting of the two families.

It was pretended upon the marriage of Henry the Seventh, to Elizabeth, the daughter of Edward the Fourth, that the rose first appeared with mixed petals of red and white, which is still acknowledged throughout Europe as the emblem of that happy union, by the name of York, and Lancaster Rose.”

Gerrard tells us that the double white rose formerly grew wild in the hedges of Lancashire, in great abundance as briars. This we presume was the white dog rose which had become double by some accidental circumstance, and that the variety propagated itself by suckers and layers, in a soil that was suitable for that purpose.

“ The sweetest rose where all are roses.”

The most delightful rose of which the garden boasts is the Provence, or provins rose, *Rosa provincialis*, and which has been claimed by the inhabitants of the south of France as a native of Provence; whilst the Dutch, says Gerrard, consider themselves entitled to this flower, and say, as it first came out of Holland, it ought to have been named the Holland Rose, and not Provence rose; but it appears very evidently from Pliny, that neither of these countries can justly hold it as a native plant. He calls it a Greek rose, and thus describes it in the fourth chapter of his twenty-first book, The rose named *Græcula*, has its petals

or flower leaves folded or lapped over each other so closely, that they will not open of themselves, unless they be forced with the fingers, and therefore look as if they were always in the bud, but when they are expanded, they are the largest of all the roses," This account correctly corresponds with the nature of the Provence rose, which is often called the Cabbage rose, from the manner in which the petals cabbage or fold over each other. As this rose is so nearly allied to the damask rose, it is probable the Greeks first obtained it from the vicinity of Damascus, and that the trivial change is owing to soil and cultivation.

(To be continued.)

ON THE GERANIUM HOUSE.

BY AN AMATEUR.

HAVING perused the following article with great satisfaction and pleasure, I consider it well worthy the attention of those who delight in the culture of that most beautiful flower the Geranium, I have transcribed it and sent it to you, which if you think worthy of a place in your valuable Publication, it will be, no doubt, both instructive and entertaining to many of your readers.

"The late Mr. Colville was amongst the first who saw the propriety and adopted the practice of growing the *Geraniaceæ* in a house by themselves. Since that time many have followed the example, and, judging from the fine specimens brought to the public exhibitions within these last three years, we are led to think that in no department of plant culture has such a rapid improvement been made as in that of Pelargoniums. To grow these numerous and splendid plants to perfection, requires a separate house for themselves, and whoever have seen those of Catleugh, of Chelsea, and Gaines, of Battersea, as public cultivators, and those of Sir John Broughton, or R. Jenkinson, Esq., will admit, we think, that they richly deserve a house for themselves. The *Geraniaceæ* have the following attractions, namely, they are easily kept, propagated, and flowered; they continue nearly the whole season in bloom; present almost infinite variety of colour and form, and are much better adapted for standing in rooms uninjured than most other plants. New varieties are readily obtained by cross impregnation, and these are readily in-

creased by cuttings, the simplest of all modes of re-production. If the majority of Pelargoniums are deficient in fragrance, nature has made up for that apparent deficiency, by the splendour of the blossoms; and, as it were, to equalise her gifts, certain kinds whose flowers are less showy, nay, even of a dingy hue, have a delightful perfume; some during the evening and night, and others when rubbed against, or when the wind lashes the leaves and branches against each other.

Few genera of plants exhibit more fully the industry of the cultivator, or demonstrate more clearly the control he exercises in producing varieties, than in the case of the Geranium or Pelargonium. Hundreds of varieties, which are to be met with in the collections of florists, are the fruits of his ingenuity; for, however strange it may appear, it is a positive fact that not above a dozen true species are to be recognised amongst them. It is, therefore, now only in the strictly botanical collections that true species are to be seen, they having given place to sub-species originated by hybridizing. With the exception of three or four species, the whole of this splendid tribe, amounting to nearly three hundred recorded species, and above five hundred sub-varieties, have been either introduced or originated in this country within the last fifty or sixty years.

Structures calculated for the Growth of Geraniaceæ.

“An ordinary greenhouse, not too lofty, and capable of being completely ventilated, and situated in full exposure to the meridian sun, will answer very well for the culture of this tribe. As the plants of this family require all the light, air, and sun, that our climate affords, it is necessary that the Geranium house should front the south, and be perfectly free from the shade of trees or buildings.

A very complete Geranium house may be upon the same scale of size, and constructed as that recommended for a Heathery, and may be attached to it, thus forming a pretty range, which in consequence of the plants being for the most parts natives of the same country, will associate well together; or the Geranium house may be erected against the Camellia house, providing that the latter be detached from the dwelling house, and occupying the north aspect of a separate wall. One remark we shall here make respecting the erection of plant houses in which small plants are to be cultivated.

Heaths, Geraniums, and most fine flowering greenhouse plants, should never be allowed to become old or large, as such plants, for the most part, do not flower so fine or look so well, as young plants do. Houses of this description should be rather long and narrow, because in that case the plants are more within reach, and are much better seen than when they are placed too far from the eye, which they often are when the house is either too lofty or too wide.

This would be a very complete Geranium house, and would be an object both light and elegant in the flower garden if placed detached from other buildings, or it would be equally well placed if more desirable, when attached to the dwelling by one of its ends. The height of such a house should not exceed seven feet over the foot paths, which will be sufficient to admit of a free passage; for the lower such houses are, the better, so that there be plenty of head room. The length of all plant houses must be determined by local circumstances; but so far as heating is concerned, and we think it proper to mention that here, one fire, whether employed to heat a boiler of water or warm the smoke flues, will heat a house of this width and height, above one hundred feet in length. A span-roofed house we prefer for Geraniums, as the plants enjoy plenty of air, light, and solar influence, and are seen to great advantage. A span-roofed house similar to the above statement, if fifty feet in length, will contain nearly as many plants as one in the lean-to fashion of one hundred feet in length; and in regard to expense of erection will be much less.

In speaking of shading the most delicate heaths during the heat of summer, we would also recommend the same provision to be used for the Geranium house, while the plants are in bloom. The expense will be amply remunerated by the greater length of time the plants will remain in bloom, and the richness of the colours of the flowers, which, if exposed to the full solar influence, would be very much injured. The upright lights over the parapet walls should be made to take out, as during the great part of the season they will be better removed, in order that a free circulation of air be permitted to pass through the house; but they should be replaced in stormy, windy weather. This mode of ventilation will render the opening the roof seldom necessary, guarding also against sudden showers of rain, which would be very injurious to the finest flowers.

Propagation and treatment while young.

“Geraniums or, more properly, Pelargoniums, are very readily propagated by cuttings and seed, and the tuberous-rooted sorts by cuttings or pieces of the roots. To have a succession of flowering plants all the year, some attention should be paid to the period of flowering of different sorts, which a reference to Loudon's *Hortus Britannicus*, and also the period at which the cuttings are planted, will sufficiently indicate. The following routine we have been satisfied with following, viz., in August, at which period the earlier flowering kinds will have done flowering, the plants are cut down to within one or two eyes, if we may so speak; but which will be more intelligible if we say to within from an inch to half an inch of where the shoot sprung from. The shoots so taken off, are made into cuttings about six inches long, and cut close off below a joint, but the leaves should remain on, and not reduced in size, as is too often done. Each cutting is then planted in a pot of the size called large thumbs, and which are about two inches in diameter. They are then well watered, and plunged into a moderate hot-bed, kept close and well shaded, till they have begun to take root, when air is gradually admitted to them. The only care necessary during this part of their culture is to pick off all decayed leaves, to prevent the cuttings from rotting, to keep the temperature steady, but not too high, and above all to keep them shaded. In four or five weeks cuttings so treated will require to be shifted into larger pots of the size known as ‘thirty-twos’, after which the plants may be placed in a cool, airy pit, or frame, but kept close to the glass to prevent their being drawn up weak and tall; or they may at once be arranged in the Geranium house. Plants so treated will flower in March if they are removed to the Geranium house before the setting in of severe frost.

“In September, another set of cuttings should be put in, of the sorts that go out of flower at that period; these will flower in May, and a third set of cuttings should be put in, in January, which will flower from May to July; and a fourth and last set in March, which will produce plants that, if kept cool during summer, and brought into the Geranium house in September, will bloom during October, November, and part of December.

(To be continued.)

R E V I E W .

The Rose Fancier's Manual.—By Mrs. Gore. 12mo, pp. 434
London, 1838.

(Continued from page 235.)

The first article in the body of this work is on the geography of Roses. Certain authors assign the provinces of Georgia and Circassia as the native places of the older Roses; and others assert that the Rose only flourishes between latitudes 20 and 70 degrees; but the Rose of Montezuma, which grows in latitude 19 degrees, and the Abyssinian rose, which inhabits latitude 10 degrees, overturn this theory. Various countries possess species or varieties which are peculiar to them.

“Of these, some extend their growth to [over] a province, some to a smaller space of territory; some even restrict themselves to a single mountain or solitary rock. The *Rosa Polliniana* is peculiar to Mount Baldo, in Italy; the *Rosa Lyonii*, to Tennessee, in North America; while the *Rosa arvensis*, or field rose, is to be found in all countries of Europe; and the *Rosa canina*, or dog rose, in Europe, as well as a considerable portion of Asia and America.

“The roses of North America, are:—*R. blanda*, found on the glaciers of the most northerly provinces; its bright pink corolla unfolding itself immediately on the melting of the snows. This shrub is found only on the frozen deserts between 70° and 75° N. L. *R. hudsonensis* is found on the shores of the Hudson, within the polar circle, where it produces clusters of pale double flowers. *R. fraxinifolia*, which has small, red, heart-shaped petals, is found in Newfoundland and Labrador, along with *R. blanda*. *R. nitida*, which has deep red flowers, abounds on the northern coasts, and is used by the Esquimaux for decorating their hair, and their seal-skin dresses. *R. lucida* is found in the marshes of Carolina. *R. Woodsii* is found on the banks of the Missouri; and *R. carolina* on the adjoining marshes. *R. evratina* is found on the marshy banks of the rivulets of Virginia, and is extremely difficult of culture in gardens. *R. diffusa* is found in the forests and stony districts of the central and southern states of the Union. *R. parviflora* is a diminutive shrub, found on the rising grounds of Pennsylvania; and *R. stricta*, and *R. rubifolia* are found on the outskirts of the Pennsylvanian forests. *R. setigera* is found in South Carolina; and *R. lævigata*, a climbing species, inhabits the woods of Georgia, and is used by the Creoles to adorn their hair.

“The rose of Mexico is *R. Montezumæ*, a sweet scented thornless species, which abounds on the highest parts of Cerro Ventoso, near San Pedro in Mexico, where it was discovered by Messrs. Humboldt and Bonpland. The town of San Pedro is in latitude 19°; which proves that roses are found under latitude 20°, contrary to the assertion of some authors. The total number of American species of roses hitherto described is only fourteen, all of which, with the exception of *R. Montezumæ* and *R. stricta*, might be classed under the same section as the European *Rosa cinnamomea*. Those of France are twenty-four, and of Britain nearly that number, according to some botanists, and not more than six, according to others.

“Asia has to boast a greater variety of species of the rose than the rest of the earth united; thirty nine that admit of accurate definition having been

already established. Of these, the vast empire of China, where both agriculture and horticulture are arts in high estimation, has a claim to fifteen.

"First, the *Rosa semperflorens*, the leaves of which have sometimes three leaflets, sometimes only one; whose flowers are scentless, of a pale dull pink producing a pleasing effect when half blown. The *Rosa sinensis*, confounded by some botanists with the preceding, but blowing at all seasons, of a far more brilliant colour. The *Rosa Laurenceana* is a beautiful little shrub, from 3in. to 5in. in height, but, unlike most dwarfs, whether of the vegetable or animal creation, perfect in symmetry and proportion. The *R. multiflora* attains, on the contrary, a growth of 15 or 16 feet; having small, double, pale, pink blossoms, united on a single stem, so as to form beautiful bouquets on the tree. The *R. Banksiae* extends its flexile branches over rocks and hillocks, bearing a profusion of small, very double, yellowish white flowers, remarkable for their violet-scented fragrance.

"The *R. microphylla* is a favourite garden shrub of the Chinese, under the name of Haitong-hong, having small, double, pale pink flowers, and a foliage of peculiar delicacy.

"Cochin-China, situated between the 10th and 20th degrees of latitude, possesses all the roses of China, and, in addition, several indigenous species; among others, the *R. alba*, found also in Piedmont, in France, and various other parts of Europe; and the *R. spinocissima*, bearing flesh colored flowers. Japan, between the 30th and 40th degrees of latitude, has all the roses of China, besides a peculiar species, the *R. rugosa*, the solitary flower of which bears some resemblance to the *Kamtschatsken* rose.

"The southern provinces of Asia, comprehending those of India, offer many curious species to our own observation. The north of Hindostan possesses six; two of which are also found in China, and two in Nepal. The *R. Lyellii*, which bears transplantation to our own climate, and is remarkable for the profusion of its milk white flowers during the greater part of the summer, and the *E. Brunonii*, whose petals are of the same snowy whiteness, rank high among the roses of India. In approaching the southern provinces, we find the *R. macrophylla*, somewhat resembling the alpine roses of Europe; the flowers whitish, but streaked with pink towards the extremity of the petals; the *R. sericea*, of which the surface of the leaflets has a satin texture, and the flowers are solitary and drooping.

"The parched shores of the Gulf of Bengal are covered during the spring, with a beautiful white rose, found also in China and Nepal. The flowers of the *R. involucrata* are white, solitary surrounded with a collar of three or four leaves, out of which they seem to emerge; while in vast thickets of the beautiful *R. semperflorens* (a native also of China) the tigers of Bengal and crocodiles of the Ganges are known to lie in wait for their prey.

"In the gardens of the Kandahar, Samarcand, and Ispahan, the *R. arborea* is cultivated in great profusion by the Persians. This shrub which attains a considerable size, is covered during the spring with an abundance of white and scented blossoms. The *R. berberifolia* is also common in these provinces. This shrub differing so completely from every other species of rose that botanists experience some hesitation in classing it among the number [it is now *Lowea berberifolia*, see *Arb. Brit.*, ii. p. 812], has simple single leaves, and yellow star-shaped flowers, variegated, like a cistus, at the base with spots of deep crimson. The *R. damascena*, transported to Europe from Damascus by the Crusaders, affording to our gardens an infinite number of beautiful tinted varieties, adorns the sandy deserts of Syria with its sweet and brightly tinted flowers. At the extremity of Asia, towards Constantinople, the *R. sulphurea* displays its very double flowers of a brilliant yellow.

"The north-west of Asia, which has been signalised as the father land of the rose tree, introduces to our admiration the *R. centifolia*, the most esteemed of all, and celebrated by poets of every age and country, with which the fair Georgians and Circassians adorn their persons.

(TO BE CONTINUED.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. CORYCIUM OROBANCHOIDES. *Synonym SATYRIUM OROBANCHOIDES. Broomrape Corycium* (Bot. Reg. 45.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

It is a terrestrial Orchideæ, and a native of the sandy plains of the Cape of Good Hope. It is very probable that the plant which has recently bloomed in the collection of John Rogers, Jun. Esq., Streatham, Surrey, is the first that bloomed in Europe.

The flowers are small, produced in a spike, which rises about six inches high. The flower is a pale yellow having the end of the petal a reddish-purple. Corycium, from *korukos*, a little bag, attending to the form of the flower.

2. CYRTOCHILUM MACULATUM. *Spotted flowered.* Bot. Reg. 34.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native near to Yera Cruz. It has bloomed in the London Horticultural Society's Garden. The scape of flowers rises above a foot high, bearing from eight to ten blossoms, each of which is about an inch and a quarter across. The petals are of a yellowish green, beautifully spotted with brownish purple. The labellum is white at the base, but yellow towards the termination, having the edge tinged with carmine. The entire plant has very much the appearance of an *Oncidium*.

3. LOBELIA BRIDGESSII, *Mr. Bridge's* (Bot. Mag. 3671.)

LOBELIACEÆ. PENTANDRIA MONOGYNIA.

A native of Chili, where it was discovered by Mr. Rodges. Seeds of it were received by W. T. Aiton, Esq. and the plant bloomed in the greenhouse at Kew, in 1837. The plant grows to about four feet high, having a raceme of its beautiful blossoms, each of which is near two inches long. It is a very desirous species, and doubtless will be a very ornamental plant for the greenhouse or conservatory.

4. MAXILARIA ROLLISINIA. *Messrs. Rollison's Maxilaria.* (Bot. Reg. 40.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of Brazil, imported from thence by Messrs. Rollison's of Tooting. The plant is very dwarf. The flower, stem extends about two inches long, terminating with a flower about an inch and an half across. Petals of a pale yellow. Labellum, yellow, with bland coloured spots.

5. CRUCIANELLA STYLOSA. *Long-styled.* (Bot. Reg. 55.

CRUCIANELLA, PENTANDRIA MONOGYNIA.

This pretty flowering herbaceous plant was discovered by the Russians in Persia, growing upon rocks among the mountains. The flower stems rise about half a yard high, each terminates with a head of bright pink flowers, which are very ornamental. The plant seems well adapted for growing *en masse*, a bed of it would make a beautiful show. It blooms from June to September,

6. EPIDENDRUM SCHOMBURGKII. *Mr. Scomburgk's* (Bot. Reg. 53.

ORCHACEÆ. GYNANDRIA MONOGYNIA.

This beautiful flowering species was discovered by Mr. Scomburgk in the interior of British Guayana. The flowers are produced in panicles of ten or twelve on each, they are of a fine brilliant vermillion-red colour, similar to the *Lychnis Bungeana*. Each flower is about two inches across. The plant has bloomed in the collection of Messrs. Loddiges's of Hackney.

7. DAPHNE AUSTRALIS. *Southern Daphne.* (Bot. Reg. 56.

THYMALACEÆ. OCTANDRIA MONOGYNIA.

A native of Italy near Naples. It has much the appearance of *Daphne collina*, but has more hairy foliage. The flowers are of a rosy purple colour, highly transparent. It seems to be perfectly hardy in this country, and well deserves a place in the shrubbery,

8. HELLEBORUS LIVIDUS, *Corsican Hellebore.* Bot. Reg. 54.

RANUNCULACEÆ. POLANDRIA, POLYGYNIA.

A native of Corsica. It is a hardy herbaceous plant, producing erect racemes of greenish yellow flowers, each flower being about two inches across.

9. IBOMEA PLATENSIS. *The Plata Ipomœa.* (Bot. Mag. 3685.

CONVOLVULACEÆ. PENTANDRIA, MONOGYNIA.

A native of the banks of the Plata River. As is so common in the genus, it is long and climbing, bearing umbels of from two to four flowers in each. The flower is of a delicate lilac colour, having a darker eye. It is a pretty hot-house climber, blooming for several months successively.

10. SOLANUM FRAGRANS. *Transparent North American Nightshade.* (Bot. Mag. 3684.

SOLANÆÆ. PENTANDRIA MONOGYNIA.

A native of south Brazil, from whence Mr. Tweedie sent it to the Glasgow Botanic Garden, where it has recently bloomed. It grew rapidly in a pot in the stove for the first two years, but showed no disposition to bloom. It was then planted in the border in the great stove, where it soon reached the height of twelve feet, and produced numerous racemes of its changeable coloured flowers, having a powerful fragrance. The raceme is about five inches long, having ten or twelve flowers on each. The corolla at first is of a bluish-purple, changing to a brown, and ultimately to a greenish yellow, with a dark streak on each petal. The flower is about an inch across.

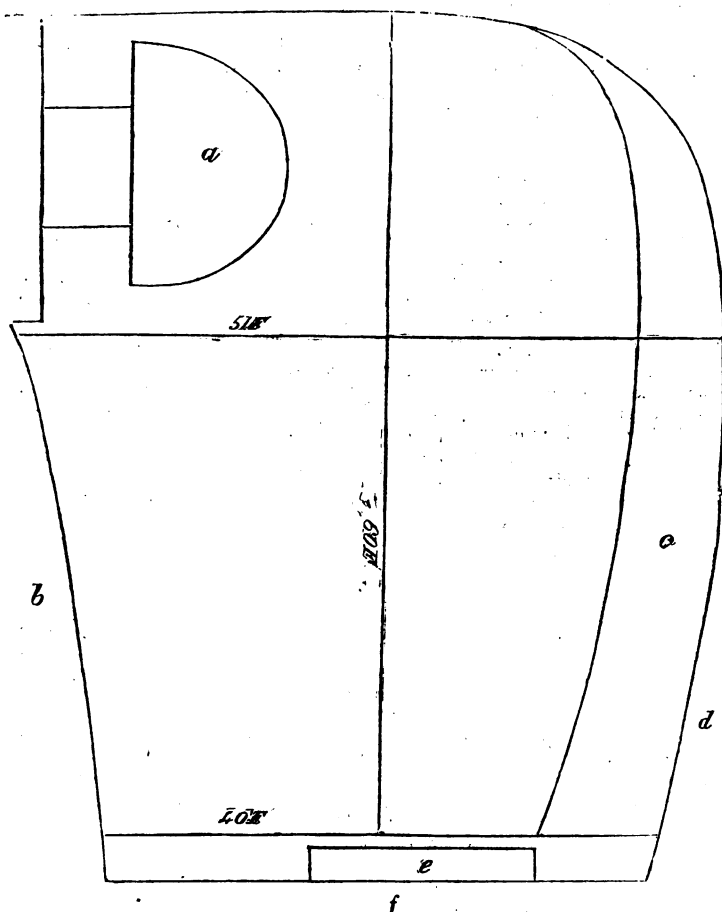
PART III. MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A PLAN FOR A FLOWER GARDEN, WITH LIST OF PLANTS SUITABLE. — A Regular Subscriber to the Floricultural Cabinet would be much obliged if some correspondent would, as early as convenient, give among the plans of Flower Gardens, one for laying out ground of the annexed form and dimensions; also a suitable list of plants, say Annuals, Biennials and Perennials, herbaceous and greenhouse plants for summer ornament would be an additional favour.

Aug. 27th, 1838.

A REGULAR SUBSCRIBER.



a, A small Greenhouse. *b*, High wall to be covered with clay. *c*, Shrubs concealing the garden from the drive to the house. *d*, Ornamental wire fence, enclosing the garden. *e*, Large window. *f*, End of the House.

ON A LIST OF MICHAELMAS ASTERS, AND SOLIDAGOS.—Few plants are more ornamental for adorning the Flower Garden and Shrubbery in Autumn, than the Michaelmas Aster, and Solidagos. The present period of the year being the blooming season, affords an opportunity to ascertain which are the most showy and ornamental sorts. If some reader of the Cabinet, having the opportunity, would furnish such a list, it would very much oblige
 Sep. 26th, 1838.

A CORRESPONDENT.

REMARKS.

NEW OR RARE PLANTS.

ARTHROSTEMMA VERSICOLOR. Changeable flowered. (Synonym, *Rhexia versicolor*).—A native of Brazil, discovered by Mr. McRae. It has flowered in the stove at the Glasgow Botanic Garden. The plant grows near a foot high, and terminates in large spreading panicles of flowers, which are of a pale-rose colour, and being produced numerous, have a pretty appearance. Each flower is about three quarters of an inch across.

PENTSTEMON ARGUTUM.—Another fine species of this admired genus. We recently saw it in bloom at Mr. Henderson's Nursery, Edgware Road, London. The flower stem rises about five feet high, having numerous lateral shoots, its whole length, producing a profusion of flowers, of a rosy purple colour. Each blossom is about an inch and a half long. It deserves a place in every flower garden.

At Lowe, and Co.'s Nursery, Clapton, we saw the following.

GLOXINIA MAXIMA. The flowers are of an extraordinary size, white with a deep purple along the lower part of the corolla inside, producing a fine effect. It is an hybrid production recently raised, we understood, in the neighbourhood of London by a gentleman's gardener.

FUCHSIA CYLINDRICA. The appearance of this new species is much like *F. Wormaldi*, but its flowers are very different. They are produced on long foot stalks, and are of a light red colour, having the end tipped with green. Each flower is about three quarters of an inch long. It does not produce much show, but is in other respects interesting.

SALVIA.—(New species.) Mr. Lowe, received a quantity of Mexican seeds sent from Mr. Tweedie, amongst which is a beautiful species of *Salvia*, which is now in flower. The plant grows four feet high, and the shoots terminate, each with a spike of flowers, of a fine blue, marked inside with white. They resemble the *S. angustifolia*, but are larger and of a deeper blue. The plant appears to be a very free grower, sending up numerous shoots from the roots. It appears to be very suitable for the open border in summer, and would produce a fine effect.

SALVIA PATENS.—Also received from Mr. Tweedie, and is a most splendid species. The plant was growing in the open border, about two feet high, a few blossoms were only left when we saw it, but it appeared to have had flowers on the spike, for a foot or upwards. Each flower is about two inches long, of a most intense blue, producing a fine effect. A bed of it in contrast (or even a single plant) with the fine scarlet and crimson kinds, would produce a fine effect. This new and fine species has not, like the blue flowered *S. Africanus* large foliage and few flowers in proportion, but appears to be the reverse of it. Plants will be ready for sale next spring, and ought to be in every conservatory, greenhouse, and flower garden.

COMBRETUM PURPUREUM. A correspondent in the Gardeners Gazette, states, that there is a plant of *Combretum purpureum* growing in a stove in the Mastyn Hall Gardens, which covers three-hundred and eight superficial feet trained against a wall, and which had, in July last, near three-hundred racemes of its fine graceful and showy flowers. The plant is growing in the corner of the pine pit, which had been partitioned off, and filled with fresh

loamy soil. The plant must have had a most splendid effect. It is further stated that the best mode of propagation is, to bring some strong roots into pots, and then to graft scions upon them. Cuttings will succeed if, when put off, the pot be placed in a greenhouse until the base of the cuttings become caloused, (a discernable swelling), then being taken into a higher temperature, the stove roots are speedily induced to push forth.

CORREA MILNERII.—Mr. Groom has a good stock of this new and fine flowering kind, but in consequence of propagating so easily, the price is two guineas a plant. The blossoms are large, and of a fine rosy red colour. It is a very desirable plant for the greenhouse or conservatory.

IPOMEA SELLOUII.—We saw a fine plant of this new species in bloom at Mr. Groom's. The flower is of a fine rosy-purple colour, having a dark eyed tube, with five darker plaits down the corolla, and each blossom is at least three inches across. Being produced in clusters and very numerous, renders it a most ornamental plant, for the plant stove, warm greenhouse, or conservatory. The plant has a very fine foliage, and is a rapid grower.

GOLPHEMIE AUREA. We saw a plant of it in bloom with Mr. Groom, in April, in the greenhouse, and the same plant we saw removed into the plant stove, in fine bloom in October, so that it had been blooming for more than six months. It is a neat growing plant, about four feet high, branching, and each branch terminating with a spike of golden coloured flowers, each blossom being about half an inch across.

CHORIZEMA CORDATA.—Plants of this very interesting and beautiful species have been in bloom in most of the public nursery establishments around London, most of the Summer. It is a neat growing plant, flowering profusely, and is a very conspicuous object in the collections. It ought to be grown in every greenhouse and conservatory. It is a very rapid grower and propagates readily when struck in sand and heat.

HIBBERTIA PEDUNCULATA.—An interesting plant growing in the greenhouse at Messrs. Loddiges's. It grows about a foot high, bushy, flowering most profusely for some months, and with its bright golden flowers, has a showy and pretty appearance. It may be procured very cheap, it merits a place in every collection.

EDITOR OF MONTHLY NOTES.

It is our purpose in future in each number of the Cabinet, to insert the substance of our monthly observations and remarks, upon every thing connected with floriculture that may come under our notice. In recently looking over the floral periodicals and gardening works, we noticed in the *Gardener's Magazine* a very interesting account of Bedford Lodge, Camden Hill, near London, the Suburban Villa of His Grace the Duke of Bedford. The particulars have been furnished by Mr. Caie, the excellent gardener there. There are six well executed wood engravings given, exhibiting views of the mansion, grounds, and flower garden. The cultivation of flowers, it appears, is a principal object there, and a very striking feature in the management of the flower garden, is to produce the most brilliant display of flowers during May, June and July, the period when His Grace most usually visits there. We have been informed by those visiting the place, that the display of flowers during those months, and even up to October, is such as to be quite dazzling. In order to have the finest flowering annuals in full bloom as early in the season as May and June. Mr. Caie sows the seed as early as January, viz., such as *Nemophilla insignis*, *Collinsia grandiflora*, *Gilia tricolor*, *Gilia achilleæfolia*, *Collomia coccinea*, *Platystemon californicus*, *Eschscholtzia crocea*, &c. When the display of these are declining, a second exhibition is produced by perennial plants, which are grown permanently in their compartments, such as *Oenothera macrocarpa* which succeeds *Nemophilla insignis*.

REFERENCE TO THE EMBELLISHMENTS.

We have recently had the pleasure of seeing a number of drawings of Hybrid *Gladioluses* exhibiting by J. Plant, Cheadle, Staffordshire: we were much struck with their novelty and splendour, and Mr. P. having kindly allowed us the use of the drawings, thus affording us the pleasure of giving our readers four of those we judged most beautiful.

Mr. P. informed us that he had a great quantity of other seedlings which he expects to bloom next summer, and has also a lot of hybrids from quite a different origin, some of which have bloomed, and have a delightful and powerful fragrance.

FLORICULTURAL CALENDAR FOR NOVEMBER.

All greenhouse plants should now be housed without delay, and air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are during the night prejudicial to the plants. The soil in the pots should frequently be loosened at the surface, to prevent its forming a mossy or very compact state.

The plants of the *Cactus* that have been kept in the open air during the summer, may be brought to bloom successively, by taking such as are desired to bloom immediately into the heat of a forcing pine house. Other plants to bloom afterwards, should be kept in a greenhouse protected from the frost.

The plants of the *Calceolaria* that has been grown in the open borders during the summer months, should now be taken up and potted, afterwards kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water, just sufficient to keep the soil moist will only be necessary.

The Chinese *Primroses* that has been grown in the open borders, will require to be taken up.

The plants of some of the *Chrysanthemums* that are grown in pots, and taken into the greenhouse, will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. And so much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

The *Dahlia* seed, if not cut off by frost, will now be perfected. They are best retained in the heads as grown, spread singly, where they will not be liable to mould, and kept in a dry, but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots will now require taking up, if not done last month.

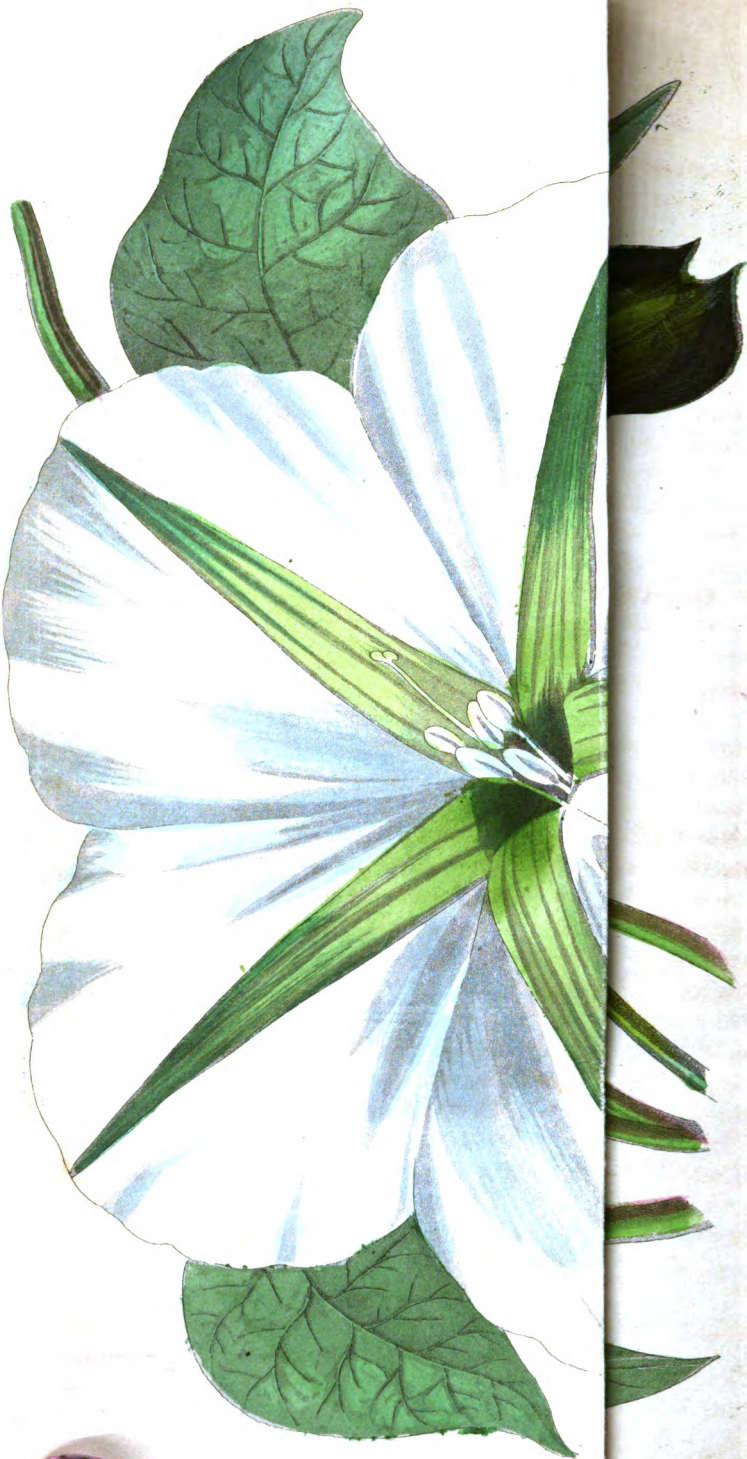
Dutch roots may in this month be successfully planted.

Fuchsias and greenhouse plants intended to be inured to the open air, will require to have protection at the roots, &c.

Tubers of *Commelinas*, and bulbs of *Tigridias*, should be taken up and preserved dry through winter.

Newly planted shrubs, in exposed situations should be secured to stakes.

Herbaceous border plants may still be divided and replanted.



Alex. La Harpe

Ipomoea magniflora

PL. CULT. AL. MAR. 1871. 1872.

THE
FLORICULTURAL CABINET,

DECEMBER, 1st, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.
ON CHINESE GARDENS.

BY SIR W. C.

AMONGST the Chinese, gardening is held in much higher esteem, than it is held in Europe; they rank a perfect work in that art, with the great productions of the human understanding; and say that its efficacy in moving the passions, yields to that of few other arts whatever. Their gardeners are not only botanists, but also painters and philosophers; having a thorough knowledge of the human mind, and of the arts by which its strongest feelings are excited. It is not in China as in Italy and France, where every petty architect is a gardener; neither is it as in another famous country, where peasants emerge from the melon grounds to take the periwig, and turn professors; as Sganarelle, the faggot maker, quitted his hatchet and commenced physician. In China gardening is a distinct profession, requiring an extensive study, to the perfection of which few arrive. The gardeners there, far from being either ignorant or illiterate, are men of high abilities, who join to good natural parts most ornaments that study, travelling, and long experience can supply them with; it is in consideration of these accomplishments only that they are permitted to exercise their profession; for which the Chinese taste of or-

VOL. VI. No. 70.

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namental gardening is an object of legislative attention; it being supposed to have an influence upon the general culture, and consequently upon the beauty of the whole country. They observe, that mistakes committed in this art, are too important to be tolerated; being much exposed to view, and in a great measure irreparable: as it often requires the space of a century to redress the blunders of an hour.

The Chinese gardeners take nature for their pattern, and their aim is to imitate all her beautiful irregularities. Their first consideration is the nature of the ground they have to work upon; whether it be flat or sloping, hilly or mountainous, small or of considerable extent; abounding with springs and rivers, or labouring under a scarcity of water; whether woody or bare, barren or rich; and whether the transitions be sudden, and the character grand, wild, or tremendous, or whether they be gradual, and the general bent, placid, gloomy or cheerful. To all which circumstances they carefully attend; choosing such dispositions as humour the ground, hide its defects, improve or set off its advantages, and can be executed with expedition at a moderate expence.

They are also attentive to the wealth or indigence of the patron by whom they are employed; to his age, his infirmities, temper, amusements, connections, business and manner of living: as likewise to the season of the year in which the beauty of the garden is likely to be most frequented by him; suiting themselves in their composition to his circumstances, and providing for his wants and recreations. Their skill consists in struggling with the defects and imperfections of nature, and with every other impediment; and in producing in spite of every obstacle, works that are uncommon, and perfect in their kind.

Though the Chinese artists have nature for their general model, yet are they not so attached to her as to exclude all appearance of art; on the contrary, they think it, on many occasions, necessary to make an ostentatious shew of their labour. Nature, say they, afford us but few materials to work with; plants, ground, and water, are her only productions; and though both the forms and arrangements of these may be varied to an incredible degree, yet have they but few striking varieties; the rest being of the nature of changes rung upon bells, which, though in reality different still produce the same uniform kind of jingling, the variation being too minute to be easily perceived.

Art must therefore supply the scantiness of nature; and not only be employed to produce variety, but also novelty and effect; for the simple arrangements of nature are met with in every common field, to a certain degree of perfection, and therefore are too familiar to excite any strong sensations in the mind of the beholder, or to produce any uncommon degree of pleasure.

It is indeed true, that novelty and variety may both be attained, by transplanting the peculiarities of one country into another, by introducing rocks, cataracts, impending woods, and other parts of romantic situations, in flat places; by employing much water where it is rare, and cultivated plains, amidst the rude irregularities of mountains; but even this source is easily exhausted, and can seldom be put in practice, without a very great expence.

The Chinese are no enemies to strait lines, because they are generally speaking, productive of grandeur, which often cannot be attained without them; nor have they any aversion to regular geometrical figures, which they say are beautiful in themselves, and well suited to small compositions, where the luxuriant irregularities of nature would fill up and embarrass the parts they should adorn. They likewise think them properest for flower-gardens, and all other compositions, where much art is apparent in the culture; and where it should not be omitted in the forms.

Their regular buildings they generally surround with artificial terraces, slopes, and many flights of steps; the angles of which are adorned with groups of sculpture and vases, with ornaments intermixed with all kind of artificial waterworks, which, connecting with the architecture, spread the composition, serve to give it consequence, and add to the gaiety, splendor, and bustle of the scenery.

Round the main habitation, and near all their decorated structures, the grounds are laid out with great regularity, and kept with great care; no plants are admitted that intercept the view of the buildings, nor any lines but such as accompany the architecture properly, and contribute to the general symmetry and good effect of the whole composition; for they hold it absurd to surround an elegant fabric with disorderly rude vegetation; saying, that it looks like a diamond set in lead, and always conveys the idea of an unfinished work,

When the buildings are rustic, the scenery which surrounds them is wild; when they are grand, they are gloomy; when gay,

it is luxuriant : in short, the Chinese are scrupulously nice in preserving the same character throughout every part of the composition ; which is one great cause of that surprising variety with which their works abound.

They are fond of introducing statues, busts, bas reliefs, and every production of the chissel, as well as in other parts of their gardens as round their buildings, observing, that they are not only ornamental, but by commemorating past events, and celebrated personages, they awaken the mind to pleasing contemplation ; hurrying our reflections up into the remotest ages of antiquity ; and they never fail to scatter ancient inscriptions, verses, and moral sentences about their grounds, which are placed upon the back of colossal tortoises and elephants ; on large ruined stones and columns of marble, or engraved on trees and rocks : such situations being always chosen by them, as correspond with the sense of the inscriptions ; which thereby acquire an additional force in themselves, and likewise give a stronger expression to the scene.

They say that all these decorations are necessary to characterize and distinguish the different scenes of their compositions ; among which without such assistance, there would unavoidably be a tiresome similarity.

And whenever it is objected to them, that many of these things are unnatural, and ought therefore not to be suffered, they answer, that most improvements are unnatural, yet they are allowed to be improvements, and not only tolerated, but admired. Our vestments, say they, are neither like leather, nor like our skins, but formed of rich silks and embroidery, our houses and palaces bear no resemblance to caverns in the rocks, which are the only natural habitations ; nor is our music either like thunder, or the whistling of the northerly wind, the harmony of nature. Nature produces nothing either boiled, roasted or stewed ; and yet we do not eat raw meat ; nor doth she supply us with any other tools for all our purposes, but teeth and hands ; yet we have saws, hammers, axes, and a thousand other implements ; in short, there is scarcely any thing in which art is not apparent, and why should its appearance be excluded from gardening only ? Poets and painters soar above the pitch of nature, when they would give energy to their compositions. The same privilege, therefore, should be allowed to gardeners ; inanimate simple nature is too insipid for our purpose ; much is expected from us, and therefore we

have occasion for every aid that either art or nature can furnish us with. The scenery of a garden should differ as much from common nature, as an heroic poem doth from a prose relation; and gardeners, like poets, should give a loose to their imagination, and even fly beyond the bounds of truth, whenever it is necessary to elevate, to embellish, to enliven, or to add novelty to their subject.

The usual method of distributing gardens in China, is to contrive a great variety of scenes, to be seen from certain points at which are placed seats or buildings, adapted to the different purposes of mental or sensual enjoyments. The perfection of their gardens consists in their number and diversity of these scenes; and in the artful combination of their parts; which they endeavour to dispose in such a manner, as not only separately to appear to the best advantage, but also to unite in forming an elegant and striking whole.

(To be continued.)

ARTICLE II.

ON THE CRATÆGUS OXYANTHA AND ITS VARIETIES.

BY MR. JAMES SMITH, ABERDEEN.

THE garland of Flora does not possess a more charming blossom than this British hedge beauty; nor do the most luxurious spices of Asia, give a more grateful perfume than this sweet-flowering shrub presents.

It is said that the hawthorn flowers, not only regale the spirits by their odour, but that they have the power also of counteracting poison. It has been made the happy emblem of hope, because the young and beautiful Athenian girls brought branches of hawthorn flowers, to decorate their companions and friends on their wedding day; whilst they carried large boughs of it to the altar. The altar of Hymen was lighted with torches made of the wood of this tree, and it formed also the flambeau which lighted the nuptial chamber.

Diodorus, a Sicilian historian, who flourished about forty years before the Christian era, tells us the Troglodites, when they interred the corpses of their friends and parents, tied branches of hawthorn to their bodies: and then, laughing, strewed the body first with the branches of this shrub, and afterwards with stones,

until it was covered. These simple people considered death as the morning of life, where they should never separate. Happy hope ! which gave the Troglodites immortality, and the Grecian youths fond of marriages ; may, you likewise, ever be the prop of the afflicted, and those whose friends

——— “ When they once perceive
The least rub in your fortune, fall away
Like water from you, never found again
But when they mean to sink ye.”

Religion, which was given to bless mankind with cheerfulness and hope, has always been converted by the crafty, in ignorant ages, into rods of terror and torches of superstition ; and they did not fail to seize upon the hawthorn bush as an instrument with which they might impose on the credulous ; thus, in some parts of France, the country people affirm to you in good faith, that the hawthorn groans and sighs on the evening of Good Friday, and on this superstition, they have made it the emblem of lamentation. There are others, who gravely adorn their hats with a bunch of hawthorn, in the belief, that during a storm, the thunder will not dare to reach them, from respect to their head-dress. It is also related, that on the morning following the horrible massacre of St. Bartholomew, a hawthorn was seen to blossom in the church yard of St. Innocent, in Paris, which is now converted into the hall or great market. It is hardly necessary to state, how differently the two parties interpreted this phenomenon.

We have also our Glastonbury thorn stories, to match those of our neighbours. Sanctified deceit affirmed, that this thorn was the identical staff of Joseph of Arimathea, the counsellor who buried Christ ; who, according to the tradition of the abbey of Glastonbury, attended with twelve companions came over into Britain, and founded in honour of the blessed Virgin, the first Christian church in this island. As a proof of his mission, he is said to have stuck his staff in the ground, which immediately shot forth and blossomed ; and the vulgar for a long time believed that this tree blossomed annually on Christmas day.

The Glastonbury thorn is a variety of the common white thorn *Oxycantha*, which blossoms in the winter about January or February, and sometimes even as early as Christmas.

It is often called white thorn from the colour of the flower-petals, May-bush from blossoms appearing in that month, and which were

more noticed in old times before the country was embellished with so many early-blowing shrubs; for on the festival of Flora, on the first of May, our ancestors never failed decorating with it the May-pole, which was permanently fixed in or near every town and village in the kingdom, and the boldest youth climbed to fix the garland of flowers on the top, whilst others less courageous, hung festoons and wreaths of flowers through the garland, or twined them around the pole,

"To fetch the flowers fresh, and branch and blome,
And namely, hawthorn brought both page and grome,
With fresh garlandes, partly bleu and white;
And then rejoyse in hir grete delite,"

CHAUCER.

A king and queen were then elected, who regulated the entertainment, and settled disputes; the former was distinguished by an oaken wreath, and the latter by one of hawthorn; when dancing and other rural sports took place in honour of the goddess. This rustic amusement was evidently introduced by the Romans; in their ancient games, that of Floralia were instituted in Rome as early as the time of Romulus, and which the Phœceans and Sabines observed even in earlier days. As Rome became degenerated, this feast was turned into scenes of the most unbounded debauchery and licentiousness; and it is related that Cato wished once to be present at the celebration, but when he saw that a deference for his presence interrupted the feast, he retired, not choosing to behold the indelicate spectacles that were about to take place in public. This behaviour so captivated the degenerate Romans, that the venerable senator was treated with the most unbounded applause as he retired, which shows that virtue and modesty are always respected even by vice itself.

At the present time there is not a door in Athens, that is not crowned with a garland of flowers on the 1st of May; and the youth of both sexes, with the elasticity of spirits so characteristic of a Greek, that when under the power of the Turks, they forgot or braved their masters, while with guitars in their hands and crowns upon their heads,

"They lead the dance in honour of the May."

Religious devotees call it the noble thorn, from a belief that it was this thorn which formed the crown of Christ.

The hawthorn branches are scarce less gaily besprinkled by Flora in the spring, than adorned by Pomona in the autumn, who nourishes the feathered choristers with these scarlet haws, and on this account we should have in our shrubbery

———— “berry bearing thorns,
That feed the thrush,”

And none should omit

“The hawthorn bush, with seats beneath the shade.”

The double blossomed hawthorn, is certainly one of the greatest ornaments of our pleasure grounds, whether it be kept as a shrub, or trained as a tree. There was, or perhaps still remains two large trees, of this description on the lawn, before Warwick house, at Worthing, whose impenetrable shade defies the beams of Sol, when he darts his fiercest rays.

Some of the double varieties are of a fine crimson, rose, and lake colour; others are white at their first appearance, and change to a faint red as they decay. The double blossoms are less fragrant than the common variety, which reminds us, says a French writer, of those young females who fear not to change their simple apparel for a more gaudy dress, which adds nothing to their attractions.

The foliage of the hawthorn is of the most agreeable medium green, and so highly polished, that the white flowers are reflected on their shining surfaces.

It has often caused our surprise that men who expend large sums of money in forming gardens of pleasure, and much time in selecting plants, should bestow no time or attention on botany, which would add so materially to the gratification which flowers give them; for without some slight knowledge of this science, they cannot enjoy the works of nature, because they do not know where to look, or the utility at what they look at. The botanist looks into the flowers of the hawthorn, not only to observe the stigma and to count the chives that surround it, but observes the shape of the five petals, whose concave forms protect the pollen, and mature it by acting as reflectors. He then sees them bend over their chives, and rest their heads of pollen on the stigma, which has some attractive power not yet defined. He is delighted with the regularity and order with which they discharge

their prolific powder, and retire back to give place to other chives until the whole have performed their office without confusion. He knows then that the petals have discharged their part towards the formation of the future plants and he sees them given to the wind without regret, because it is necessary for the young fruit to enjoy the juices of the plant, without being spent any longer upon the petals.

J. SMITH.

ARTICLE III.

ON THE GERANIUM HOUSE.

(Continued from page 256.)

“The tuberous-rooted sorts are much less generally cultivated now than formerly, their flowers bearing no comparison to those of the half shrubby kinds. Such may, however, be readily increased by planting pieces of the roots in small pots, in a slight heat; leaving a small portion of the root above ground.

On this subject, the following rational remarks are from the pen of Mr. Appleby, in a communication in the Horticultural Cabinet, Vol. V. p. 9.

“During the growing season, they require water very freely; but as soon as they have done flowering, and their leaves begin to turn yellow, decrease the quantity of water gradually; the best method to do this, will be to water once in three days, then once a week, then once a fortnight, and lastly once a month: by which time they will be completely at rest, when no water must be given them till they begin to grow again, which may be looked for about February and March. When at rest, any situation where they can be kept moderately dry and cool, will do for them: heat, light, and moisture being unnecessary.”

“The best time to increase this section of *Felargoniums*, is just before they begin to grow. Take off a small tuber or two, where they can be spared, from each plant, and put them into as small pots as they can be placed, just to cover them; place them in gentle heat giving them but little water till they begin to grow, when they may be removed amongst the established plants, and the ordinary culture given; they may also be increased by seed

which, however, they do not produce so freely as the shrubby species."

In regard to the species that have not been hybridized, of which *P. bicolor*, *tricolor*, *ovatum*, *tetragonum*, *elatum*, *pendulum*, *fulgidum*, *elegans*, &c. form a part, the above authority directs as follows: "As they are all shrubby species, they require watering all the year, though always carefully, for if the soil gets soddened with water for any length of time, it is in general fatal to the plants. They also require greenhouse treatment during winter and spring. In summer they should be placed out of doors in an open situation, screened from high winds, and set upon a bed of ashes so thick, as to prevent worms from getting into the pot; keep them clear of weeds, tied up neatly, and regularly watered during dry weather. Pot them into larger pots when they require it, the best operation for which is the month of April.

To propagate them take youngish cuttings off about the month of May; fit some bell or small hand-glasses to such a number of pots as may be required; fill them half full with broken potsherds, rough bits of turf, or any thing that will permit the water to pass freely off; pot in upon them as much compost, (loam, peat earth, vegetable soil, and sand, in equal proportions, which is found to be the most proper for them) as will fill up to the top with pure sand, then give it a gentle watering, and insert the cuttings, giving more water to settle the sand close and firm to them. When pretty dry, cover them with the glasses, and place them in a gentle heat; pot them off, when struck, and keep them close and warm till they have struck root again; then give them the ordinary treatment as to situation, air, watering, potting, and so forth."

Propagation of the large or ordinary sorts of *Pelargoniums* by seeds is seldom practised, excepting with a view to obtain new varieties; and it is almost vain to attempt this, unless attention has been paid to artificial impregnation. Geranium seeds are best sown soon after they are ripe, provided that does not happen after August, in which case it would be better to delay sowing till February or March. When the seeds are sown, they should be placed in a mild hot-bed, and regularly shaded till they have vegetated, after which they should have been accustomed to the sun and air to harden them previous to their being potted, which should be done when they are about an inch, or an inch and a half high; their treatment after this differs from that of cuttings, only that they need not be topped with a view to form bushy plants, as

it is not until they flower that their merits can be ascertained.

Seedlings however should be stimulated, by being grown in very rich soil, and occasionally watered with liquid manure.

General treatment when in the House.

By the latter end of September, the Geraniums, if they have been placed out during the summer, should be arranged in their winter habitation, along with such as has been recently propagated from cuttings. We would be understood here, however of not advocating the practice of originating the whole collection of Pelargoniums annually from cuttings, for we have found that most sorts flower well the second year, by following the simple routine of shaking the mould entirely away from such plants as have been cut down, after flowering, re-potting them again in much smaller pots than those they flowered in, and placing them for a fortnight or three weeks in a close frame in which a slight bottom heat is maintained, until they begin to make fresh roots and break into young branches. After this they should be placed in a sheltered situation until the end of September, when they are removed into the Geranium house. During winter they should be supplied with air and water, and kept slowly growing until February, when they should be shifted into pots at least two sizes larger than those they have stood in during winter. From this time until they begin to come into flower, their growth should be encouraged by allowing them plenty of room on the shelves or stages, supplying them with an abundance of air and water, and turning them frequently round, so that all sides of the plants may enjoy an equal share of light and sun.

If kept too close, or too far from the glass, Geraniums are liable to grow up weak, and in that case seldom flower fine: they are also liable in that case, to be attacked by the green-fly, which must be removed upon its first appearance, by the application of tobacco smoke from the fumigating bellows. They are not subject to any other diseases. We are aware that this is not the practice followed by the most eminent growers of this splendid tribe, but we recommend it to such as, from a variety of circumstances, have neither the convenience or skill to bring on an annual supply.

The plants originated from cuttings planted in August and treated as directed above, may, when potted into two-sized pots, be

placed in the Geranium house, or if they be kept in a cool, airy pit or frame, they need not be removed till the beginning of November: at all events, at whatever period they are brought in, it is essential that they should be placed as near to the glass as possible, and abundantly supplied with air, and not set too closely together. All rambling shoots, and such as appear to grow too fast, should be pinched off, for the future habit of the plant depends on its treatment at this period. Most young plants have a tendency to send up one leading shoot, which often attains a considerable height without sending out lateral branches. A plant allowed to run so, can never afterwards be brought into a handsome form, and if the formation of the plant be not set about when young, it cannot be done afterwards without sacrificing the flowers, which lie in embryo in the points of the shoots that would in that case be cut off. One of the greatest faults in the ordinary mode of cultivating Geraniums is, to run up tall and naked at the bottom; when such a course is followed, the plants will neither flower well nor look so handsome.

The Greenhouse kinds of Geraniaceæ, though nearly all natives of the Cape of Good Hope, are much less hardy than the family of Erica from the same country; this may be accounted for in various ways;—soft wooded or succulent plants are more liable to be injured by frost, than hard wooded plants from that latitude, their exterior skin or outer bark being very thin, and their juices being extremely abundant. Again most of the family Erica are indigenous to the mountains, while most of the Geraniums are inhabitants of the plains, thus proving that altitude is as much to be studied in calculating the comparative degree of hardness in plants, as latitude.

“We know,” says Mr. M’Nab, “from undoubted authority, that certain species of Cape Geraniaceæ, and certain species of Erica grow together in the same kind of soil, and in the same situation, intermixed one with the other in their native country; but we know that in this country the same species of heaths will bear a degree of cold with impunity, which will materially injure, and in many cases kill the Pelargoniums growing beside them.

“To grow Cape Ericaceæ and Geraniaceæ well together, would require far nicer management than I pretend to be acquainted with. I know, however, that heaths will bear a degree of cold in the greenhouse in winter, (which I am persuaded is beneficial to their health) which will materially injure Cape Geraniaceæ. If

therefore a particular point is to be found to which the thermometer may be allowed to sink in the inside of greenhouses during a severe frost, will preserve the Geraniaceæ from injury and not produce too much heat for the safety of the heath, it is one which I have never been able to ascertain.

“I am speaking however, of these two families so as to have them in a high state of perfection. They must be both kept in the same house so as to make a tolerable appearance; but I believe not in such a state of perfection as if they were in separate houses; for the fire heat which is absolutely necessary during severe frost for the one, is, as far as my observation goes, sure to be in some degree injurious to the other.”

Most of the Cape species are much hardier than the English hybrids, for many of the former, particularly the tuberous-rooted kinds, stand in the open borders of this country during winter, while none of the latter, so far as we know, have ever been known to do so. The same degree of cold that would not injure the most tender *Erica*, would be fatal to the whole tribe of hybrid *Geraniums*.

During winter, frost must be excluded by covering the *Geranium* house with canvass, or by the application of artificial heat from the fire, either through smoke flues or hot water pipes, so as to keep the temperature from falling below thirty-two degrees, but it should by no means be allowed to rise by the same means to forty degrees, a higher temperature during the day and by sun heat, is quite a different thing.

On the general treatment of *Pelargoniums*, we find the following communication of Mr. Appleby in Vol V. of the *Horticultural Cabinet*, so replete with good sense and practical skill, that we cannot do better than give the quotation almost at length.

“The season to take *Geraniums* into the greenhouse depends upon the weather; and as all Cape plants are much healthier, and flower more freely the more they are exposed to the full air, so long as frosts keep off, I delay the taking them in: in fact, this last season, I did not house them generally until the middle of October. Choice kinds I have covered up with mats or large sheets of canvass, elevated on stakes, on such nights as are likely to be frosty.

“Perhaps no months in the whole year are so unhealthy for *Geraniums* as November and December, for the weather generally is dark, damp, and rainy, and the plants being full of sappy green

leaves, and having received a check from the new potting, are often shedding leaves, which I constantly remove, or they would become mouldy, and give out a bad smell, offensive both to the owners and to the plants themselves. At all times during the day I give as much air as possible, by opening the doors, windows, ventilators, &c. In the mornings I have a fire made to dry up damp, but allow it to go out before the house is shut up, for the remedy is worse than the disease; close heat at this season being most injurious.

“During the severity of winter, fire is necessary to keep out the frost, (when very severe both day and night), but I am careful not to create damp by watering more than is absolutely necessary. It often happens on frosty days, that the sun shines clear and bright, and though the atmosphere is frosty, I always give air to lower the temperature of the house, to admit fresh, and to dry up damp.

ARTICLE IV.

ON THE DIFFERENT QUARTERS FROM WHICH THE WIND MOST PREVAILLS EVERY MONTH IN THE YEAR.

BY AMICUS.

As THERE are few persons who are not acquainted with the wonderful difference which takes place in the temperature of the atmosphere, by the wind changing from one point of the compass to another, I take the liberty of sending you an extract of Metreological observations during the period of ten years, shewing from what quarter the wind most predominates in each month, a knowledge of which, may, perhaps, not be uninteresting to your readers, as there is no doubt that the existence of plants depends more upon the state of the temperature of the atmosphere than any other cause whatever.

The winds which predominate most in each month of the year are as follows :

During the month of January, the northerly winds predominate by a fourth of their amount prevail over the southerly.

During the month of February, the southerly winds predominate over the northerly almost a third.

During the month of March, the north east winds are in greater proportion, than during any other part of the year, exceeding their own average by more than a third, probably from the cold winds which are engendered on the desert wastes of Siberia, or northern Russia, seeking a more genial and warm climate at this season of the year.

During the month of April, the north-east winds abate somewhat of their excess, but still continue in very high proportion. The northerly winds predominate over the southerly; but the general easterly winds prevail over the westerly.

During the month of May, the north easterly winds having decreased for the last two months, fall below average, and the southerly winds predominate. Variable winds are at their greatest amount.

During the month of June the easterly winds predominate by more than a third, chiefly from a return of the north westerly wind.

During the month of July, the westerly winds prevail over all the rest; the south-west is also in high proportion; the north east is very low, and the wind from east to south at its minimum, having gone off for two months.

During the month of August, the wind from west to north is at its maximum, having increased for three months, and the wind from south to west, in high proportion, having increased for two months. The winds from north to east are at their minimum; and from east to south little removed from it. This month too, has the least proportion of variable winds.

During the month of September, there is almost a balance between the northerly and southerly winds; in other respects, the wind from east to south attains nearly its highest amount.

During the month of October, the north-east and south-east winds are nearly equal; but the winds from the south to west predominate over the whole; and with the aid of the wind from east to south, exceeds the northerly winds by a fourth of the sum of the latter.

During the month of November, northerly winds predominate at least by a fourth of their amount, chiefly bearing towards the east.

During the month of December, the northerly and southerly winds are nearly equally balanced; but the westerly winds double the sum of the easterly.

If you should think the above observations upon the variations of the wind worthy of insertion in the Cabinet, it is at your service, and also at the service of your readers.

AMICUS.

ARTICLE V.

REMARKS ON THE ROSE.

(Continued from page 256.)

At what period this beautiful flower first found its way into English gardens is uncertain. Gerard speaks of it as no rarity in 1597. Hackluyt says, that the damask rose was brought in by Dr. Linaker, physician to King Henry VII. and his successor. But from the verses of Chaucer, and other old Poets, it appears that the garden roses were common in this country at a much earlier period, and we can hardly suppose that so many pilgrimages would be made to Rome, and even to Jerusalem, without some one's bringing back plants of these flowers, that were so commonly used in Christian churches, and so highly extolled for their medicinal virtues.

In those early days the principal gardens of this kingdom were attached to priories and other religious edifices, and as the heads of these establishments had frequent communication with similar communities on the continent, we may safely conclude that so precious a gift as the rose would not pass neglected. From the uxurious manner in which the Romans lived in this country for many ages, and from their habit of wearing wreaths of roses at their banquets, it is more than probable that they introduced many kinds of their own roses into the gardens which they formed in this island. The principal variety of the Provence rose are, the Common, Scarlet, Blush, White, Rose de Meaux, Pomponé, Rose de Rheims, Childing's Blandford, Rose of St. Francis, Shailer's,, and the varieties of the Damask rose are, the Red, Blush, York and Lancaster, Red monthly, White monthly, Blush monthly, Great Royal, Blush Goliath, and Imperial blush, with many others that are yearly raised in various parts of the world by sowing the seed.

THE MOSS ROSE.—*Muscova*.

“ The rose that hails the morning,
 Arrayed in all its sweets,
 Its mossy couch adorning,
 The sun enamour'd meets.”

This elegant rose is generally supposed to be the offspring of the Provence rose, whilst others think it belongs to the family of Centifolia or hundred leaved rose. It appears to be quite unknown to the ancients, as they have left no description of a flower that resembles it, and it is too singularly beautiful to have escaped Pliny's notice, had it been in existence. By Furber's catalogue it appears that it was cultivated here in 1724; but Miller first saw it in Dr. Boerhaave's garden in Leyden in 1727. The learned Doctor not only corresponded with many botanical persons in this country, but visited England, and became a member of the Royal Society of London. It is therefore most likely that on its first appearance in this country, a plant would be forwarded to Leyden, for the inspection of a person that all Europe was then regarding as the star of the age.

Although the moss rose appears to be a plant of so short an existence, its birth place is not satisfactorily known; but from all the accounts we can collect of its register, it appears to be a fortuitous child of England, as we have numerous accounts of its having been exported, but none of its importation into this island, nor has it been discovered elsewhere, except in a state of cultivation. Messrs. Lee and Kennedy, of Hammersmith have, a few years since produced a perfectly single moss rose, which they pronounce to be only a variety of the common Provins rose. We must therefore conclude that the moss-like pubescence of the calyx and young branches, is owing to some accidental circumstance which this climate produces, as we are told that this variety loses its mossiness, almost immediately when planted in Italy, and we have not yet heard of this rose having been in any instance raised from seed, for the single moss rose was reduced to that state from the double variety (either accidentally or intentionally) by a peculiar mode of cultivation. The single variety of the moss rose, as well as the double white moss rose, still continue scarce, and bring high prices to the nurserymen near London.

The moss rose is made the emblem of voluptuous love, and
 Vol. VI. No. 70.

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the creative imagination of the poet thus pleasingly accounts for this rose having clad itself in a mossy garment :

“ The angel of the flowers, one day,
 Beneath a rose-tree, sleeping lay.
 That spirit—to whose charge is given,
 To bathe young buds in dew from heaven.
 Awaking from his light repose,
 The angel whisper'd to the rose,—
 ‘ O fondest object of my care,
 Still fairest found where all are fair,
 For the sweet shade thou’st given to me,
 Ask what thou wilt, ‘tis granted thee,’
 ‘ Then,’ said the rose, ‘with deepened glow,
 On me another grace bestow.’
 The spirit paused in silent thought,
 What grace was there that flower had not?
 ‘Twas but a moment—o’er, the rose
 A veil of moss the angel throws.
 And, robed in nature’s simplest weed,
 Can there a flower that rose exceed ?”

M. Redouté, the author of a French pictured work on *Roses*, seems displeased at our claiming the moss rose as originating in England: he says, nous ferons observer qu’il n’est pas rare de voir les Iconographes Anglais considérer beaucoup de plantes comme indigènes au sol de leur pays, toutes les fois que le lieu dans lequel elles végètent naturellement leur est inconnu, circonstance qui doit faire rejeter toutes les assertions de ce genre.”

Madame de Genlis tells us, that during her first visit to England, she saw moss roses for the first time, and that she took to Paris a moss rose-tree, which was the first that had been in that city; and she says, in 1810, “the cultivation of this superb flower is not yet known in France.”

Madame de Latour endeavours to do away with this statement. In a high strain of compliment, she says, “when Madame de Genlis returned from London to Paris, she was become very celebrated, and the crowds of people who went to her house under pretence of seeing the moss rose were attracted thither by that lady’s celebrity; and the modesty of Madame Genlis alone could have led her into this error; for this rose tree,” she adds, “which is originally from Provence, has been known to us for several ages.

Mr. Rossig, who has lately published a work on roses, and with good coloured figures, says, that the moss rose is found on the Alps. But this information comes rather late, as it is improbable that a plant of such a size and singular beauty should have escaped the penetrating eyes of the various botanists who have herbalized so frequently on these mountains, as not to have left a species of grass or even moss unrecorded.

The moss rose is propagated by layers or suckers which it sends up plentifully when growing in rich light garden mould, that is rather moist than over dry. When the branches are laid down they should be slightly bent so as to crack the bark, which will cause them to take root sooner. This beautiful rose is also increased by budding upon stocks of the other sorts, which is generally performed in the month of May; but these plants are not so durable as those raised by layers.

THE HUNDRED-LEAVED ROSE—*Rosa Centifolia*.

This is the rose which painters chuse to represent Love and Hymen. It is certainly a fine flower, being very double and of a deep crimson colour; but the perfume is very weak, and the petals do not hang so loose and gracefully as in many other species; and it has, from the regularity of its petals, been compared to a rose made by a turner, and there called *Flos quasi tornatus*.

This species of rose, which has become the Parent of a most numerous variety, is a native of the mountains lying between 41 and 42 degrees of north latitude, if we may trust to the best ancient natural historian that ever wrote on plants. Pliny says, that the roses which grow about Campania, in Italy, and near Philippi, in Greece, are so double, that they have a hundred leaves, and are therefore called *Centifolia*. "However," says the author, "these soils do not bring forth these hundred-leaved roses naturally, for it is the mountain *Pangæus*, near adjoining upon which they grow naturally, but when transplanted into the neighbourhood of Philippi, they become finer flowers than when on their native mountain;" and he adds, that "these very double roses are not so sweet as others."

This author tells us, that *Cæpio* who lived in the time of *Tiberius*,

was of opinion, that the hundred-leaved rose had no grace in a garland either for smell or beauty, and therefore should not be used in chaplets. Loureiro mentions it as a native of China; but Theophrastus and Pliny, clearly prove it to be an European tree.

Aiton does not notice the native place of this rose, and it is also omitted in *Le Bon Jordainier*, of Paris, down to the present time. The able compiler of the *Hortus Kewensis*, tells us from Gerard, that it was cultivated in our gardens in 1596. This appears to be an error, as Gerard in the original edition only notices this rose from the ancients; Martyn has fallen into the same mistake in his admirable edition of Miller.

We are not therefore able to discover at what time this rose was introduced, as it is not mentioned by Parkinson, in his *Garden of Pleasant Flowers*, of 1629; nor does it appear in his *Theatre of plants* of 1640.

THE CINNAMON OR MAY ROSE.—*Rosa Cinnamoma*.

This agreeably perfumed rose, which opens its small blossoms in our gardens about the end of May, is a native of Nice in Italy, and has been common in our pleasure-grounds for many ages, as Gerard tells us, in 1597, that it was then cultivated in this country, both in its single and double state.

This rose loves a dry soil and sunny situation, and deserves a more frequent place in the shrubbery than modern plantations allows it, as its flowers appear a month before the common roses, and the bush grows tall enough to fill a middle situation amongst shrubs, where its smooth plum-coloured branches have good effect.

It is a favourite with our fair, as it may be worn in the bosom longer than any other rose, without fading, whilst its diminutive size, and red colour, together with a pleasant perfume, adapt it well to fill the place of a jeweller's brooch.

THE MUSK ROSE—*Rosa Moschata*.

“And each inconstant breeze that blows,
Steals essence from the musky rose.”

This species of rose owes its name to the fine musky odour

which its numerous white blossoms exhale during the autumnal months. It is a native of Barbary, and grows wild in the hedges and thickets in the kingdom of Tunis; and the Tunisians cultivate it also for the sake of a highly odorous essential oil, which they obtain from the petals by distillation.

This rose has been found growing naturally in Spain by Robert Moore, Esq. who sent seeds to this country. We presume it was planted in Spain, when the Moors first overran the coast of that country,

Hackluyt tells us, in 1582, that we first obtained the musk rose from Italy. It was cultivated commonly in the time of Gerard, and as it sends forth large umbel branches of flowers at the end of each branch, in the months of September and October, it forms an agreeable companion to the common China rose, which blossoms also plentifully at that season.

The stalks of the musk rose are often too weak to support the larger bunches of flowers that crown its branches. It therefore requires a support to keep them from the earth, unless it is planted with dwarf evergreens, that form a beautiful prop to these delicate blossoms.

THE YELLOW ROSE.—*Lutea and Sulphurea.*

The single yellow brier rose, is said to be a native of Germany, the south of France, and Italy; and the single orange-coloured rose, bicolor, is an Austrian rose.

That it was through these countries that we first became acquainted with the yellow rose, there can be no hesitation in stating; but they were originally brought from more eastern climates, seems equally certain, since no ancient author we have consulted mentions a yellow rose of any description; and had it been a flower created by the art of grafting, as was formerly imagined, we should, ere this, have discovered the fact. Ludovico Verthema tells us, in 1503, he saw great quantities of yellow roses at Calicut, from whence we have no doubt, both the single and double varieties were brought into Europe by the Turks, as Parkinson tells us in a work which he dedicated to Henrietta, the queen of our unfortunate Charles the First, that the double yellow rose "was first procured to be brought into England, by Master Nicholas Lete, a worthy merchant of London, and a great lover

of flowers, from Constantinople, which, as we hear, was brought thither from Syria, but perished quickly both with him, and to all other to whom he imparted it: yet, afterwards it was sent to Mr. John de Franqueville, a merchant also of London, and a great lover of all rare plants, as well as flowers, from which is sprung the greatest store, that is now flourishing through this kingdom."

(To be continued.)

ON GROWING PLANTS IN ROOMS.

BY A FOREMAN OF A LONDON NURSERY.

To treat on the proper management of plants in houses is a subject attended with considerable difficulty, every genus requiring some variation both in soil, water, and general treatment. If the room where the plants are intended to be placed, is dark and close, but few will thrive in it; if, on the contrary, it is light, and airy, with the windows in a suitable aspect to receive the sun, plants will do nearly as well as in a greenhouse; but if they are observed to suffer, the effects may generally be traced to one of the four following causes, want of proper light and air, injudicious watering, filthiness collected on the leaves, or being potted in unsuitable soil.

The want of proper light and air, is, perhaps, the most essential point of any to be considered; for however well all other requisites are attended to, a deficiency in either of these, will cause the plants to grow weak and sickly. Let them always be placed as near the light as they can conveniently stand, and receive as much air as can be admitted, when the weather will allow; indeed those persons who have no other convenience than the house to keep them in, will find that they derive immense advantage from being, during fine weather, in spring and autumn, turned out of doors in the evening and taken in again in the morning, the night dews contributing greatly to their health and vigour.

Injudicious watering does more injury to plants in rooms, than many persons imagine. To prevent the soil ever having a dry appearance, is an object of importance in the estimation of many, they therefore water to such an excess, that the mould becomes sodden, and the roots consequently perish. Others, to avoid this evil, run into the opposite extreme, and scarcely give sufficient

to sustain the life of the plant. This is, however, by no means so common a practice as that of giving too much; for in general, if anything appears to be the matter with the plants, large doses of water are immediately resorted to, and if recovery is not speedy, it is again administered, with but little doubt of its infallible restorative powers: but such persons like an unskilful physician, who gluts the weakly stomach of his patient, only hasten what they are trying to prevent. This overplus of water, will show its bad effects by a very dark colour, and if the plant receives too little, the leaves will turn yellow, and eventually die.

The best plan is, to always allow the soil in the pot to have the appearance of dryness, (but never sufficient to make the plant flag), before a supply of water is given, which should then be pretty copious, but always empty it out of the pan or feeder in which the pot stands, as soon as the soil is properly drained. The water used for the purpose, ought always to be made about the same temperature as the room in which the plants grow, never use it fresh from the pump, but either let it stand to warm all night, or take off the chill by adding a little warm water to it, or the growth of the plants will be much checked.

Filthiness collected on the leaves, may either arise from insects or dust, the former may be speedily remedied, by placing the plants under a hand glass, or any thing that is convenient, and burning some tobacco till they are well enveloped in the smoke; and the latter may be removed, by occasionally washing them on the head with pure water, either by means of a syringe, the rose of a watering pan, or with a sponge if the dirt still adheres.

By being potted in unsuitable soil is by far the most difficult part of the business to rectify, for no certain line can be drawn unless each genus was treated on separately; however, as this cannot be done in a paper like the present, a few general remarks which, perhaps, with some little exceptions, may be found to be pretty correct, will suffice.

All plants whose branches are fragile or slender, and roots of fine thready, fibrous texture with general habits like the *Ericæ*, as *Diosma*, *Andersonia*, and *Epacris*, will require the same soil (peat earth) and very similar treatment to Cape heaths.

Those whose wood and general habits partially differ, and whose roots are of a stronger texture, as *Acacia*, *Ardisia*, *Stenocarpus*, *Tetrathica*, *Tristania*, &c. will require a portion of sandy

loam, in many cases about equal parts ; and where the habits differ materially from the Heath, only a small portion of peat earth will be required, and a compost may be made a little rich, by the addition of well rotted dung, or a similar soil to that prescribed for pelargoiiums.

Almost all Cape and other bulbs, as *Sparaxis*, *Ixia*, *Gladiolus*, *Tritonia*, &c. thrive best in a rich sandy loam, without a mixture of peat.

Shrubby and herbaceous plants, with luxuriant roots and branches, as several species of *Myrtus*, *Jasminum*, *Hibiscus*, *Hermannia*, *Heliotropium*, &c. require rich loam, lightened with leaf soil, without any portion of peat.

Plants with powerful roots, and but slender heads, as *Veronica*, *Senecio*, *Scutellaria*, *Ruellia*, *Mauradia*, &c. require a light sandy soil, mixed with a small portion of leaf mould and very rotten dung. At the time of potting always lay plenty of potsherds at the bottom of each pot, to give a good drainage.

It will be seen that those directions do not allude to either Orchideous, Succulent or Aquatic plants.

Many of the *Orchidaceæ* are parasitical, and require a portion of decayed wood, mixing with the soil ; others grow in damp moss, these being chiefly stove plants, they will not flourish in a room. There are several genera, that do very well both in the greenhouse and in rooms, as *Arethusia*, *Calopogon*, *Dendrobium*, *Ophrys*, &c. the soil suitable for these, is a mixture of about equal parts of light sandy loam and peat ; very little, or no water, must be given when they are not in a growing state.

Succulent plants of all descriptions, require very little water and in general very easily managed in rooms ; many of them thrive in a mixture of sandy soil and lime rubbish, as *Aloe*, *Cacalia*, *Cactus*, *Aizoon*, &c. others grow well in a mixture of peat and loam, as *Coris*, *Cotyledon*, *Mesembryanthemum*, &c.

Aquatic plants, as *Villarsia*, *Actinocarpus*, &c. generally do well in a mixture of peat and loam, and require to be kept constantly in a wet state ; indeed the best way is to place the pot in a deep pan or feeder, which should always be kept full of water.

Bulbs of most sorts flourish in rooms, with less care than most other kinds of plants.

If the above precautions be attended to, plants may be brought to nearly, if not altogether to as much perfection as in a greenhouse.

BY A FOREMAN OF A LONDON NURSERY.

ARTICLE VII.

ON THE CULTURE OF FUCHSIAS IN POTS.

BY MR. W. M^P. STRADSETT HALL GARDENS.

HAVING derived much information since I became a subscriber to your useful and interesting publication, the Cabinet, I beg to forward you my method of treating that beautiful tribe of plants, so profuse in their flowering, and so well adapted for the greenhouse.

Propagation.—About the middle of March I take off cuttings, always choosing the young wood, with a little of the old attached to them, after dressing off one or two of the under leaves, I insert them in a compost of equal parts of peat and leaf, mould, and one-third loam, adding as much sharp sand as will keep the soil open. I then give them a gentle watering over hand with a fine rose, and after allowing the leaves to dry, plunge them into a hot frame previously prepared.

Culture.—As soon as they are rooted, I pot them off singly into pots, according to their size, always allowing them good drainage, using the above compost for this and all other shiftings. I replace them in the frame again until they have struck fresh root; I then remove them into the greenhouse, placing them in the front shelves. When the roots fill the pots, they should be shifted into a size larger, and towards the end of June, they will require a still larger pot; they should be liberally supplied with water at this stage of their growth, giving them a little over head, which causes them to grow freely, at the same time giving them a healthy appearance. About the beginning of August I finally shift them into pots from 12 to 14 inches in diameter, training them up to single stems.

Towards the end of October, they will require but little water, and during the winter they ought to be kept in a dry state, till they begin to push in the spring. I always prefer young plants for pots, as they look much better than the old ones. I have had them from four to five feet in height, displaying their beautiful pendant blossoms in great profusion.

If you think the above remarks be worthy a place in your publication, they are at your disposal.

W. Mcp.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. SPATHODIA PENTANDRIA. Five stemmed. (Bot. Mag. 3681,

BIGNONIACEÆ. DIDYNAMIA, ANGIOSPERMIA.

It is a bignoniaceous flowering tree, and a native of India. It has bloomed in the stove of the Glasgow Botanic Garden during the last summer, the plant having attained the height of twenty feet. The plant grows erect, slightly branching at the top, where alone it is leafy. The flowers are produced upon a large panicle, and are very handsome, having much the appearance of a fine head of rosy lilac-coloured *Rhododendron ponticum* flowers. Each flower is about two inches long, limb, white and rosy purple, tube, yellowish white, calyx, dark red. It is altogether a notable plant. *Spathodea*, from spathe, a spatha; from the sheathing nature of the calyx.

2. VERONICA PROSTRATA. var. Savory-leaved. Prostrate Speedwell. (Bot. Mag. 3683.

SCROPHULARINÆÆ. DECANDRIA MONOGYNIA.

A hardy perennial plant, producing flowers of great beauty. The stems are at first prostrate, then rises six or eight inches high, having long racemes of brilliant blue flowers which continue to bloom in succession for several months. It merits a place in every flower garden, being one of the most showy plants cultivated. It may be procured at the public nursery establishments at a low price, and is very easy of increase.

3. PLEUROTHALIS VITTATA. Striped-flowered. (Bot. Reg. 133.

A native of Mexico, introduced into this country by Messrs. Loddiges. The stem appears to be of a prostrate habit, The flowers are slightly stained with dull purple. Sepals, the lower spotted with deep purple, the upper striped with the same colour,

4. CATASETUM ATRATUM, Dark-flowered, (Bot. Reg. 63.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Was introduced from Brazil by Messrs. Loddiges, and in whose extensive collection it has bloomed. It is so very distinct from other kinds that it is not considered a genuine species of *Catasetum*, having equally, a characteristic resemblance to a *Mynanthus*, into which genus, however, it is ultimately adopted; it will be a valuable augmentation. The blossoms are green, spotted with cinnamon, and each blossom about an inch across.

5. HELICHARYEUM MACRANTHUM. Large-flowered. (Bot. Reg. 58.

COMPOSITEÆ. SYNGENESIA, POLYGAMIA SUPERFLUA.

This very pretty everlasting flower has been introduced by Robert Man-

gles, Esq. from New Holland, where in the Swan River colony it is found growing profusely. It is an annual, producing large white flowers, and the end of each petal is beautifully tipped with rose. The genera *Helicharyeum* being very productive of seeds, we have no doubt but the present variety will soon become common in our gardens.

6. *HOVEA MANGLESII*. Captain Maugle's. (Bot. Reg. 62.

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

A very pretty species of this beautiful genus, and is another of the valuable introductions of Mr. Mangle's, after whom Doctor Lindley has named it. It coincides much with *H. lanceolata*, but differs from that species, by being much more hairy. The blossoms are of a beautiful pale purple.

7. *MELOCACTUS DEPRESSUS*. Depressed. Bot. Mag. 3691.

CACTÆ. ICOSANDRIA. MONOGYNIA.

This species of melon-shaped Cactus, was introduced from Pernambuco by Mr. Gardener, and is now cultivated in several collections. It is an interesting species, and when out of bloom, produces a remarkable appearance, by the seed vessels, which are of a delicate transparent rose colour, rising erect above the crown.

8. *PAVONIA SCHRANKII*. Mr. Schrank's. (Bot. Mag. 3692.

MALVACEÆ. MONADELPHIA POLYANDRIA.

This beautiful species was sent from the Berlin Botanic Garden to Edinburgh, and in the stove of the Botanic Garden there, has produced its brilliant blossoms, which are about an inch and a half long, and one inch across, of a bright orange and scarlet colour.

9. *PAXTONIA BOSEA*. Rose. Bot. Reg. 60.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A curious and beautiful Orchidæ, introduced from Manilla by Mr. Hugh Cumming, and has bloomed in the collection of Messrs. Loddiges. The blossoms are pale, whole coloured, pink, and about an inch across.

10. *PENSTEMON GLADULOSUM*. Glandular. Bot. Mag. 3693.

SCROPHULARINÆ. DIDYNAMIA, ANGIOSPERMIA.

This handsome species is one among the numerous introductions of the late lamented Mr. D. Douglas. The plant is perfectly hardy, and blossoms during June and July. The colour of the flowers are lilac.

11. *STEVIA FASCICULARIS*. Close-headed. Bot. Reg. 59

COMPOSITEÆ. SYNGENESIA, POLYGAMIA EQUALIS.

A pretty little greenhouse plant, introduced from Mexico by G. F. Dickson, Esq. Its small pale blossoms are produced in close heads of about an inch in diameter, and which are sweet scented. *Stevia*, named in compliment to Mr. P. G. Esteve, professor of Botany at Valencia,

R E V I E W .

The Rose Fancier's Manual.—By Mrs. Gore. 12mo, pp.434
London, 1838.

(Continued from page 258.)

The *R. ferox* mingles its large red blossoms and thorny branches with those of the hundred-leaved; and the *R. pulverulenta* is also observed on the peak of Narzana, one of the Circassian chain.

"In the north of Asia, Siberia boasts the *R. grandiflora*, of which the corolla bears the form of an antique cup; the *R. caucasea*, the fruit of which is of a pulpy substance; and still adjoining the Caucasian provinces, we find a yellowish variety of the caucasea, of a dingy unattractive appearance. Advancing towards the Frozen Ocean, and beyond the Ural Mountains, grows the *R. rubella*, of which the petals are sometimes of a deep crimson, but often pale and colourless as the surrounding country. Still further north, flourishes the *R. acicularis*, bearing solitary flowers of a pale red. Ten or twelve other species grow in the Russian provinces of Northern Asia; in particular, the *R. kamtschatica*, bearing solitary flowers of a pinkish white.

"In Africa, one of the borders of the vast desert of Sahara, and more especially in the plains towards Tunis, is found the *R. moschata*, whose tufts of white roses give out a musky exhalation. This charming species is also to be found in Egypt, Morocco, Mogadore, and the Island of Madeira. In Egypt, too, grows the *R. canina*, or dog rose, so common throughout Europe. In Abyssinia, we find an evergreen rose tree, with pink blossoms, which bears the name of the country, as the *R. abyssinica*. Other species are, doubtless, to be found in the unexplored countries of Africa.

"In Europe, commencing, to the north-west, with Iceland (so infertile in vegetation, that in some parts the natives are compelled to feed their horses, sheep, and oxen, on dried fish), we find the *R. rubiginosa*, with pale, solitary, cup-shaped flowers. In Lapland, blooming almost under the snows of that severe climate, grows the *R. majalis*, small, sweet, and of a brilliant colour; and the same beautiful species, as if in enlivenment of the cheerless rudeness of the climate, is to be found in Norway, Denmark, and Sweden. In Lapland, too, under shelter of the shrubby evergreens, among which the natives seek mosses and lichens for the nourishment of their reindeer, they find the *R. rubella*, already mentioned, the flowers of which are sometimes of a deep red colour.

"The *R. rubiginosa*, the pale flowers of which grow in clusters of two or three; the May rose; the cinnamon rose, the small pale red flowers of which are sometimes single, sometimes double; as well as several other hardy species; may be found in all the countries of Northern Europe.

"Six species are indigenous in England. The *R. involuta* exhibits its dark foliage, and large white or red flowers, amid the forests of North Britain, the leaves of which, when rubbed, giving out a smell of turpentine, as if derived from the pine trees among which the shrub takes root. In the same neighbourhood are found the *R. Sabina*; the *R. villosa*, the flowers sometimes white, sometimes crimson, blowing in pairs; and the *R. canina*.

"The environs of Belfast produce an insignificant shrub, known as the *R. hibernica*, for the discovery of which Mr. Templeton received a premium of fifty guineas from the Botanical Society of Dublin, as being a new indigenous plant, though since discovered to become the *R. spinosissima* in poor soils, and the *R. canina* in loamy land.

"Germany, though unproductive in rose trees, boasts of several highly curious species; among others, the *R. turbinata*, of which the very double flowers spring from an ovary, in the form of a crest; and the *R. arvensis*, with large flowers, red and double, in a state of cultivation.

"The Swiss mountains, and the Alpine chain in general, are rich in native roses. Besides the field rose, just mentioned, they have the *R. alpina*, an elegant shrub, with red solitary flowers, furnishing many varieties in cultivation; the *R. spinulifolia*, having pale pink flowers of moderate size, with thorny leaflets, that exhale a scent of turpentine. It is remarkable that two mountain roses, the Swiss *R. spinulifolia* and the Scottish *R. involuta*, should be thus alike characterised by the smell of turpentine. There remains to be cited among Alpine roses the *R. rubrifolia*, of which the red-tinted stems and leaves, as well as the pretty little blossoms of a deep crimson, form an agreeable variety to the verdure of the surrounding foliage.

"In the eastern and southern countries of Europe, rose trees abound; of which a considerable number remain to be examined and classed. The Crimea, for instance, is not acknowledged to contain a single species, though travellers describe the country as very productive in roses. In Greece and Sicily, we find the *R. glutinosa*, of which the leaflets produce a viscous matter; the flowers being small, solitary, and of a pale red. Italy and Spain have several distinct species; among others, the *R. Polliniana*, with fine large purple flowers, growing in clusters of two or three, and found in the neighbourhood of Verona. The *R. moschata* and *R. hispanica* flourish in Spain; the latter being at present excluded from the species established by Lindley. The flowers, of a light pink colour, appear in May. The *R. sempervirens*, common in the Balearic Islands, grows spontaneously throughout the south of Europe, and in Barbary. Its foliage, of glossy green, is intermingled with a profusion of small, white, highly scented flowers.

"For France, nineteen species are claimed by the Flora of De Candolle. In the southern provinces is found the *R. Eglanteria*, whose golden petals are sometimes varied into a rich orange. The *R. spinosissima* grows in the sandy plains of the southern provinces, having white flowers tipped with yellow, which have furnished many beautiful varieties. In the forests of Auvergne and the departments of the Vosges, we find the *R. cinnamomea*, which derives its name from the colour of its branches; the flowers being small, red, and solitary. The *R. parviflora*, or Champagne rose, a beautiful miniature shrub, adorns the fertile valleys in the neighbourhood of Dijon with its very double, but small, solitary, crimson blossoms. The *R. gallica* is one which has afforded varieties of every hue, more especially the kinds known as Provins roses, white, pink, or crimson. In the Eastern Pyrenees grows the *R. moschata*, a beautiful variety of which is known in our gardens as the nutmeg rose. The *R. alba* is found in the hedges and thickets of various departments, as well as the *R. canina*, or eglantine, the stock of which, straight, elegant, and vigorous, is so valuable for grafting"

This article, which is a translation from the French of Boitard, is by far the most interesting part of Mrs. Gore's book; as the monograph, to be hereafter noticed, and which is also after Boitard, is the latest and best that has yet been published.

The next article is on the culture of the rose, which is its principal use, as little is said of the culture of roses. Next follows "Botanical Character of the Rose;" "Hybrid Varieties of the Rose;" "Classification by Specific Character;" "Distinction of Species;" "Bibliography of the Rose;" and "Pharmacopœia of the Rose." This brings us to the end of Part I. page 79.

PART III.

MISCELLANEOUS INTELLIGENCE.

 QUERIES.

ON FORCING ROSES, and a list of kinds best suited for the purpose, &c.—It is difficult to obtain perfect blossoms on Rose-trees forced to bloom in February or March, and information on the subject through the medium of your useful and excellent publication, will be very acceptable.

These flowers are liable to hang down and lose their petals before they are fully expanded. Directions for their treatment are requested, particularly with regard to the degree of heat required, and the length of time the plants should remain in a stove, also whether it is advisable to sprinkle them freely with water early in the morning.

In addition to these inquiries information as to the Best Species of roses for forcing will much oblige
 A SUBSCRIBER.

October 12th, 1838.

 REMARKS.

Plants Noticed in the the Bot. Reg, but not Figured.

AMPELYGONUM CHINENSE.—On examination, Dr. Lindley has determined to construct a new genus for this plant, and has assigned for it the name of 'Cephalophilon.' From this plant, Indigo, of an excellent quality is obtained. "Polygonum tinctorium, also in our gardens, is at this time extensively cultivated in Belgium as a domestic substitute for the tropical Indigo, and is said to produce the dye in great abundance, and of the finest quality."

BANISTERIA TENUIS.—A native of Buenos Ayres. The flowers are a bright yellow, and the plant is a greenhouse creeper.

BERBERIS TENUIFOLIA.—This will prove a most valuable addition to the interesting and beautiful evergreens composing this genus. It has been sent from Vera Cruz, by Mr. Hartweg, to the Horticultural Society, London. It is expected to be nearly as hardy as B. fascicularis, and is described as "an evergreen bush with thin, smooth, rather glaucous pinnated leaves, entirely free from all spinosity."

CALYSTEGIA SEPIUM.—This, although a native of New Holland, is identified with the European Bind weed, and we presume it is only noticed by Dr. Lindley on account of its having been found in Australia.

CATASETUM ATRATUM.—A native of Brazil, and cultivated by Messrs. Loddiges. The flowers are dark. A figure will shortly be given in the Bot. Reg.

CARPESIUM PUBESCENS.—Seeds of this plant have been received from Dr. Falconer; a plant of little importance, and a mere variety of C. nepauncense.

CYNOGLOSSUM GRANDIFLORUM.—A beautiful herbaceous plant, growing to the height of nearly three feet, with a strong and branching stem. The flowers are blue, bordered with white.

CYPPELLA PLUMBEA.—Seeds of this plant have been introduced from Mexico, by George Frederick Dickson, Esq. It has somewhat the appearance of *tigridia*, and like this plant, the flowers are equally fugitive.

ECHEVERIA SECUNDA.—Raised in the garden of Sir Charles Lemon. It is a Mexican plant, requiring a high temperature a gravelly soil and very little water.

ENTELLA PALMATA.—A greenhouse shrub, occasionally cultivated in collections under the name of *sparmannia palmata*

HYDROTENZIA MELEAGRIS.—The curious plant in question, forming the basis of a new genus, has been found near the Real del Monte mines in Mexico, and communicated to Dr. Lindley, by John Rogers, jun. Esq., of Seven Oaks. It would appear to be intermediate between *tigridia* and *tritillaria*. The flower-stem is about eighteen inches high, and the flowers are in form and colour like *tritillaria pyrenaica*, but somewhat smaller.

MAXILLARIA VITELINA. This is a very beautiful plant, with yellow flowers, a native of Brazil, remarkable for having a rich deep brown spot in the centre of its yellow lip.

MORRENIA ODORATA.—A native of Buenos Ayres, and raised from seeds in the gardens of the Horticultural Society, London. This is a greenhouse plant, flowering in August and September. The name *Morrenia* has been given to this genus, to commemorate the name of Professor Chas. Morren, of Liege. The species in question requires the protection of the greenhouse, and is a dwarf creeper, with small dingy green flowers.

NICOTIANA ROTUNDIFOLIA.—Also a native of Swan River, and introduced by Robert Mangles, Esq., of Sunning Hill. The flowers are smaller than those of *N. suaneolens*, and the leaves resemble those of *Petunia nyctaginiflora*. It is a hardy annual with white flowers.

ONCIDIUM PULVINATUM.—A desirable plant, resembling *O. divaricatum*. The panicle of the flowers is eight or nine feet in length. A figure of this is also promised.

ONCIDIUM HIAN.—A small species approaching near to *O. carinatum*; a native of Brazil, and cultivated by Messrs. Rollesons. "It has small yellow and brown flowers, with an extraordinary appendage to the lip, erect white fleshy, as long as the column parallel with that organ, and resembling the four fingers of the hand, a little hollowed, and closed together. This is quite a new modification of structure.

PAXTONIA ROSEA.—Said to be a most curious plant, sent from Manilla, by Mr. Cumming. It flowered in the collection of Messrs. Loddiges during June last. This genus has been named in honour of Mr. Paxton, whose name deserves to be permanently associated with *Orchidacæ*, a fact which will be readily admitted by all who have witnessed the admirable manner this curious and ornamental family is managed at Chatsworth.

PHYSOSIPHON CARINATUS.—This plant has recently been imported from Mexico, by George Barker, Esq., of Birmingham.

PICRIS BARBARORUM.—A cichoraceous plant, a native of New Holland, where it is used by the natives as an article of food; and Dr. Lindley says it is about as fit for this purpose as the common sow thistle.

PIMELEA CRINITA.—Said to be a pretty little plant, with white flowers. It has flowered in the collection of Robert Mangles, Esq., of Sunning Hill. It is a native of Swan River.

PODOLEPIS CONTORTA.—A pretty perennial plant, with golden yellow flowers and dark green fleshy leaves. The flower stem is from six to nine inches high. Seeds of this plant were sent from Van Dieman's Land, by Mr. J. Bunce, to the Horticultural Society, London.

POLYGONUM AMPLEXICAULO.—"This charming herbaceous plant, inhabiting the mountains in the north of India, with long graceful racemes of the most brilliant ruby-coloured flowers," has lately made its appearance among some plants raised from seeds; we are not informed where, but a figure is promised. Its flowering season is July and August.

PSORALEA CINEREA.—An annual plant, of little beauty, with small purple flowers. A native of New Holland.

ROEPCRA AURANTIACA.—Is a native of the interior of New Holland; the flowers are of an orange-yellow. It has been raised in the garden of the Horticultural Society, where it flowers in the open border during July.

SEDUM MISERUM.—A succulent plant of no beauty; a native of Mexico.

SPIRANTHES DIURETICA.—A native of Chili, with white and green flowers, studded in a beautiful manner with crystalline points. It is an orchidaceous plant, succeeding very well in the greenhouse.

THYSANOTUS INTRICATUS.—A figure of this pretty plant is promised to be given in the Bot. Reg.

VANAA LAMELLATA.—The flowers of this plant are as large as those of *V. Roxburghii*. The flowers are pale yellow, and stained with red. It is nearly allied to *V. spalhutata*, a species common in the East Indies, but which no one seems yet to have imported.

EDITOR OF MONTHLY NOTES.

When plants are of half hardy perennials, they are taken up at the end of the season, preserved in pits or frames through winter, and turned out early in spring. In some of the beds a training plant is planted at the centre, such as *Maurandia Barclayana*, &c., and trained to rods or wires from the centre, in lines to the outside of the bed. As great a contrast in colour as possible is attended to, such as a bed of yellow *Calceolarias*, having the *Maurandia Barclayana*.

Enothera Speciosa, with its showy white flowers and the *Lysimachia pericillata*, yellow, are found to bloom freely where the shade of trees was very dense. The *Enothera taraxifolia* will also flourish well in such a situation. When grown in the pleasure ground, near to the walk, they have a very fine effect towards evening.

Campanula garganica with its pretty blue flowers, is one of the most ornamental of dwarf plants to be grown in a mass. Against a wall of some extent, Summer and Autumn flowering Roses are trained; some of the Autumn flowering kinds require to be protected, but an interesting discovery has been made relative to these kinds, viz. by having hardy kinds budded on the extreme shoots of the tender ones, and whilst all the shoots upon such plants not budded were destroyed by the severity of the last winter, not any of those parts which had been budded upon were in the least injured. Thus it appears that the vigorous and late growth of the scions, kept the stock in a condition of vigorous growth at the season when otherwise it would have been dormant.

It is stated in Paxton's Magazine of Botany that seed of the *Rhodanthe Manglesii*, being sown in August in pots, having each pot filled about one half with broken potsherds, and then nearly filled up with a compost of (equal parts) decayed leaf mould and light maiden earth, on which the seed is sown and just covered from the light, kept moist, and placed in gentle warmth. The plants, as soon as can be done, are potted singly into small sixty sized pots, well drained. They are removed into larger pots as the roots issuing through the holes at the bottom indicates, and are kept in the greenhouse through winter, when they will bloom from the end of March. Sowings made in September or October, bloom proportionably later, and somewhat finer than the August sowing. Such a very neat and beautiful

flowering plant, well merits any attention given to it, and in the early part of the season is very ornamental for a greenhouse or room. Plants either in the open ground or pots, when the blooming is over, if not allowed to produce seeds, the withering flowers be cut off, and the plants be repotted into larger pots, will induce a fresh growth, and they will bloom abundantly.

The same attention to many of the new and showy annuals would be attended with equal success, and thus a Greenhouse, Conservatory, or Room might be highly ornamented in spring and early summer. Such kinds as *Nemophilas*, *Eutocas*, *Gilia tricolor*, *Hibisens Africanus*, *Calundrinia discolor*, *Browallea grandiflora*, *Bartonia aurea*, *Nolana atriplicifolia*, *Campanula Loreii*, *Clintonia pulchella*. *Lapinus nanus*, *Lupinus elegans*, *Malope grandiflora*, *Shænogyne speciosa*, *Salpiglossis pulchella*, &c. These require no forcing, and when in bloom mixing with bulbous flowering plants, &c., produce a lively effect. We have seen an instance where this attention to their culture has been attended to for the last three seasons, with delightful success. (CONDUCTOR.)

Dahlias have this season been trained against a wall, and blooming profusely, had a beautiful appearance. In both sun and shade they succeeded well. *Chrysanthemums*, in either situation, did alike well. Heartsease trained against a shady wall, to fill up the vacancies between *Dahlias* or *Chrysanthemums*, have succeeded admirably.

NEW OR RARE PLANTS.

URCEOLINA PENDULA.—An *Amaryllideæ* plant, a native of the shady woods of the Peruvian Andes. The flowers are yellow with a green and white margin. It has bloomed in the greenhouse of the Honourable and Reverend W. Herbert, Spofforth.

MIMOSA MARGINATA.—This pretty plant has been grown in some collections of this country for about four years, and gone by the name *Mimosa prostrata*, *M. Mexicana*, and *M. scandens*. It has stood during the winters of 1837 and 1838 in the open border. It is a very neat plant for training against a wall, verandah, &c. Its pretty purple heads of flowers and neat foliage strongly recommend it.

DENDROBIUM DENUDANS.—brought into this country by His Grace the Duke of Devonshire's collector in India. The flowers are produced on nodding racemes, and are green and white.

CŒLOGYNE WALLICHIANA.—Another *Orchideæ* brought by the before mentioned collector. In its native country it grows and covers the ground with a pavement of its curious stems, which wither up in the dry season, but change into a brilliant carpet of rosy flowers when rain has descended.

MENDINILLA CRYTHROPHYLLA.—A plant belonging to the *Melastomaceæ* tribe, brought from India by the above named collector. The flowers are of a bright rose colour, near an inch long, produced on axillary cymes.

GARDOQUIA BETONICOIDES.—Mr. Lowe of the Clapton Nursery received seeds of this plant from Mexico, and succeeded in raising it, with whom it has bloomed. It is an erect, sweet scented herbaceous plant. The flowers are of a bright purple. It resembles *G. Multiflora*, but the flowers are rather smaller.

TRADESCANTIA IRIDESCENS.—A native of Mexico, from whence it has been sent to Sir Charles Lemon, Bart. M. P., in whose collection it has recently bloomed. The flowers are produced numerously, and are of a bright reddish-purple colour. It is probable it will prove a half-hardy herbaceous plant.

IPOMŒA TYRCANTHINA.—G. F. Dickson, Esq. received seeds of this plant from Mexico, a plant of which has bloomed in the garden of the London

Horticultural Society. It is superior to either *I. Horsfalliæ* or *I. rubro-cœrulea*. The flowers are very large, of a rich deep-purple, and being produced in profusion, have a splendid effect. It is a fine plant for the stove, conservatory or greenhouse.

EPIDENDRUM CALAMARIUM.—From Brazil. The flowers are of a yellowish green, with fine small violet coloured spots. It has bloomed with Messrs. Loddiges's.

COMBRETUM MACROPHYLLUM.—This is a noble species not yet bloomed in this country. The foliage is fine, each leaf being about twelve inches long and four broad, of a fine deep green. If the flowers should be in proportion and of a vivid colour, it will be a most ornamental climbing plant for the conservatory. Messrs. Rollissons of Tooting possess the plant.

ACACIA KERMESINA.—This new species is in appearance like *A. Julibrissin*, but the flowers, which are produced numerously, are of a fine scarlet colour, and consequently have a very showy appearance. It is also in the possession of Messrs. Rollissons. We also have plants of it.

ESCHORANTHUS INCURVALLIA.—This is a beautiful parasitical plant, producing numerous clusters of orange-scarlet flowers, have a very pretty appearance. It is an interesting plant for the stove or conservatory. Plants are now offered at two guineas each by Messrs. Rollissons.

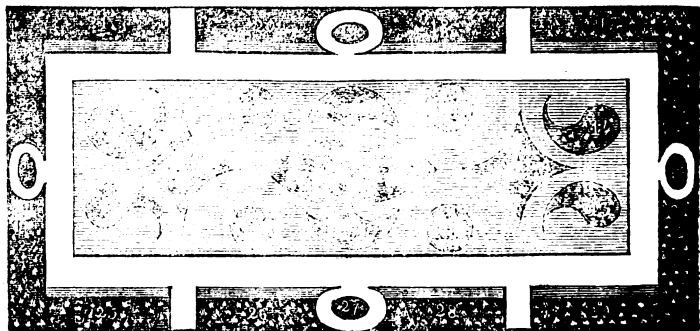
KENNEDIA MACROPHYLLA.—This new species is the most noble in its appearance of any we have seen. Each leaf being about six inches long, of a dark green. The flowers are of a purple-crimson colour. It is a very desirable plant for the greenhouse.

ACACIA CULTRIFORME.—This plant has a most beautiful appearance even without a flower, but it gives an additional beauty to it when loaded with its clusters of fine orange and yellow flowers. It ought to be in every greenhouse or conservatory.

CHOROZEMA LATIFOLIA.—This is a fine addition to this interesting and pretty tribe of plants. The plant has not yet bloomed in this country that we have heard of. We saw it only in the collection of Messrs. Rollissons.

PLAN OF THE FLOWER GARDEN AT HILL PARK.—The seat of D. Baillie, Esq. with a list of plants grown in it, from Thompson's Treatise on Hot Water, &c. published by Groombridge.

Knowing that every thing appertaining to Floriculture will be acceptable to our readers, we have extracted from that valuable little treatise of Mr. Thompson's, (late Gardener to the Duke of Northumberland), on the constructing and heating of Greenhouses, &c. the accompanying plan of a



Flower Garden, designed by Mr. Drewett, Gardener to David Baillie, Esq. of Hill Park, with a list of plants recommended by him, for the ornamenting of flower gardens on similar plans.

We are induced to notice Mr. Drewett's plan and mode of embellishing Hill Park Flower Garden, from the recollection of his having spent many years in the Royal Botanic Garden, at Kew, and from his long experience as a practical man, both in this country and on the continent. We with great confidence direct the notice of our readers to Mr. Drewett's system of furnishing beds in flower gardens, it being the opinion of a good practical gardener, of long and great experience.

We shall feel greatly obliged by our correspondents favouring us, from time to time, with any interesting plans for flower gardens, with lists of plants and directions for management.

Names of Plants grown in Hill Park Flower Garden.

No.	No.
1. <i>Anagallis Monelli</i>	white and other light coloured <i>Petunias</i>
2. <i>Anagallis grandiflora</i>	17. <i>Fuchsia globosa</i> and <i>Delphinium sinensis</i>
3. Scarlet geraniums and <i>Delphinium grandiflora</i>	18. <i>Oenothera Drummondii</i> and <i>Phlox cordata</i>
4. <i>Verbena Drummondii</i> and <i>Antirrhinum major</i>	19. <i>Petunia phyllicaulis</i> and <i>Aster amellodes</i>
5. <i>Verbena melindris</i> and double white <i>Antirrhinum</i>	20. <i>Petunia phuenicia</i> and <i>Hydrangeas</i>
6. <i>Calceolaria viscosissima</i> , and double white Lillies	21. Variegated leaved scarlet Geranium, and <i>Delphinium grandiflora</i> .
7. <i>Fuchsia Thomsonia</i> and <i>Delphinium Barlowii</i>	22. <i>Oenothera missouriensis</i> and <i>Mesembryanthemum floribundum</i>
6. <i>Lantana Sellowii</i> and <i>Verbena aubletia</i>	23. <i>Phlox Drummondii</i> and <i>Petunia gracilis</i>
9. <i>Verbena Arranana</i> and <i>Elcholtzia, crocea</i>	24. <i>Oenothera Drummondii</i> and <i>Campanula latifolia</i>
10. <i>Verbena Tweediana</i> and <i>Lobelia lutea</i>	25. <i>Calceolaria majoriana</i> and <i>Calceolaria integrifolia</i>
11. <i>Lobelia erinus</i> and <i>Antirrhinum caryophylloides</i>	26. <i>Phlox reflexa</i> and prince of Orange geranium
12. <i>Crassula coccinea</i> and <i>Heliotropium peruvianum</i>	27. <i>Tigridia pavonia</i> and <i>Nolana atriplicifolia</i>
13. <i>Verbena aubletia</i> and <i>Mesembryanthemum spectabile</i>	28. <i>Delphinium grandiflora</i> and <i>Oenothera taraxifolia</i>
14. <i>Mesembryanthemum blandum</i> and <i>Petunia intermedia</i>	29. <i>Gladiolus psitticinus</i> and <i>Verbena Lambertia</i>
15. <i>Oenothera macrocarpa</i> and <i>campanula gargensis</i>	30. Brighton scarlet geranium and <i>Oenothera macrocarpa</i>
16. Double scarlet <i>Lychnis</i> and new	

SEALEY'S QUEEN VICTORIA PINK.—Noticed in the August Number, was, in consequence of wrong information sent us, miscalled Tealey's Queen Victoria. (Ed.)

FLORICULTURAL CALENDAR FOR DECEMBER.

PLANT STOVE.—Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, &c. required to bloom from January, should be brought in early in the present month, the plants should be placed at first in the coolest part of the house, never allow them to want water. Pots or boxes containing bulbous

rooted flowering plants as Hyacinths, Narcissuses, Persian Irises, Crocuses, &c., should occasionally be introduced so as to have a succession of bloom. All stove plants will require occasionally syringing over the tops in order to wash off any accumulated dust from the foliage. Cactus plants that have been kept out of doors or in the greenhouse, should occasionally be brought into the stove for flowering.

GREENHOUSE.—As much fire as will barely keep out frost will be necessary and for the purpose of drying up damp arising from foggy nights, or from watering; all possible air should be admitted in the day time, but mind to keep the plants from damage of frost. Chrysanthemums will require a very free supply of air, and a good supply of water; by the end of the month many will be going out of bloom, such should be cut down and if any kind be scarce, the stalks may be cut in short lengths and be struck in heat, always cut the lower end of the cutting close under the joint. If greenhouse plants require watering, or syringing, over the tops, let it be done on the morning of a clear day when air can be admitted, and towards evening a gentle fire heat should be given.

FLOWER GARDEN.—Be careful to protect beds of, what are technically called, Florists Flowers, should severe weather occur. Calceolarias that were cut down and repotted last month will require attention, not to water too much or they will damp off, keep them in a cool and airy part of the greenhouse or pit. Auriculas and Polyanthus will require plenty of air in fine weather, and but little water; the like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over to see if any are moulding or likely to damage, let the roots be dry before they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have free air, and be raised above the ground; if they are under a glass case, it will be much better than if exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undisturbed, reduce them to a desirable size by cutting them round with a sharp spade. When it is desirable to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week stocks, and mignonette, in pots for blooming early next spring to adorn a room or greenhouse, must not be overwatered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night will answer well. Tender evergreens newly planted, would be benefitted by a little mulch of any kind being laid over roots. During hard frosts if additional soil be required for flower beds, upon grass lawns, advantage should be taken to have it conveyed at that time, so that the turf be not injured by wheeling.

REFERENCE TO THE EMBELLISHMENTS.

IPOMEA MAGNIFLORA.—Seeds of this very fine flowering species were sent to a Lady of this Country from India, a seed of which was very obligingly sent us. We shall give some particulars respecting it in our next number, having been sent too late for the present one. (Editor.)

INDEX TO PLATES FIGURED IN VOL. VI., 1838.

	Facing.	Refer.
✓✓ <i>Camellia Japonica</i> , var. <i>Marchioness of Exeter</i>	97 ..	120
✓✓ <i>Chorizema cordata</i>	169 ..	192
✓✓ <i>Chorizema ovata</i>	49 ..	72
✓✓ <i>Chrysanthemum Indicum</i> , var. <i>Minerva</i>	193 ..	216
✓✓ <i>Chrysanthemum</i> , <i>Freestone's</i> , Seedling	193 ..	216
✓✓ <i>Clematis Sieboldii</i>	49 ..	72
✓✓ <i>Clintonia pulchella</i>	1 ..	24
✓✓ <i>Cosmos tenuifolius</i>	25 ..	48
✓✓ <i>Dahlia</i> , <i>Ansell's Unique</i>	73 ..	96
✓✓ <i>Dahlia</i> , <i>England's Defiance</i>	73 ..	96
✓✓ <i>Dahlia</i> , <i>Marquis of Lothian</i>	73 ..	96
✓✓ <i>Euphorbia fulgens</i>	145 ..	168
✓✓ <i>Glycine Harrisonia</i>	1 ..	24
✓✓ <i>Gladiolus</i> , var. <i>picta blanda</i>	241 ..	264
✓✓ <i>Gladiolus</i> var. <i>venus</i>	241 ..	264
✓✓ <i>Gladiolus</i> var. <i>victor</i>	241 ..	264
✓✓ <i>Gladiolus</i> var. <i>victoria</i>	241 ..	264
✓✓ <i>Ipomea Magniflora</i>	266 ..	300
✓✓ <i>Lilium speciosum</i>	217 ..	240
✓✓ <i>Lisianthus Russellianus</i>	25 ..	48
✓✓ <i>Lophospermum scandens</i>	217 ..	240
✓✓ <i>Mimulus Harrisonia</i>	169 ..	192
✓✓ <i>Pansey</i> , <i>Duke of Marlborough</i>	121 ..	144
✓✓ <i>Pansey</i> , <i>Gem</i>	121 ..	144
✓✓ <i>Pansey</i> , <i>Ne plus ultra</i>	121 ..	144
✓✓ <i>Pansey</i> , <i>Thompson's Victoria</i>	121 ..	144
✓✓ <i>Petunia prasina marginata</i>	145 ..	168
✓✓ <i>Petunia vittatus</i>	115 ..	168
✓✓ <i>Pentstemon heterophyllum</i>	217 ..	240
✓✓ <i>Pink</i> , <i>Nevills' Seedling</i>	193 ..	216
✓✓ <i>Sparaxis</i> , seedling	49 ..	72
✓✓ <i>Stenhousea oculata</i>	169 ..	192
✓✓ <i>Tropaeolum Jarrattii</i>	97 ..	120
✓✓ <i>Tropaeolum tuberosum</i>	97 ..	120
✓✓ <i>Verbena Arranana</i>	25 ..	48

GENERAL INDEX,

A

ORIGINAL

	Page.
Annals, observations upon the recently introduced	100

AUTHORS.

A constant Reader, query by	118
A Foreman of a London Nursery on growing Plants in rooms	288
A constant Subscriber and Amateur, query by	236
Ditto ditto query by	161
A. M. D. query by	212
An Amateur, query by	92
An ardent Admirer, on hybridising plants by	168
An enthusiastic Tulip Grower, query by	44
A New Subscriber, query by	92
An Old Florist, on the Carnation by	150
An Old Subscriber, on striking cuttings in water by	155
Ditto ditto query by	166
A Subscriber, query by	11, 44
A young Amateur, query by	212
A young Gentleman, query by	188

NEW PLANTS.

Agave Americana	156
Anacochillus setacens	45
Anigozanthus flavida	187
Ditto Manglesii var. angustifolia.	20
Amphicome arguta	115
Aristolachia saccata	89

MISCELLANEOUS

Amaryllis, query on	212
A practical Treatise on Warming Buildings, reviewed	95
A practical Treatise on constructing and heating Horticultural Buildings, revised	235
April, Calendar for	95
August, Calendar for	191
Auricula, on the	21
Azaleas, on greenhouse	215

B

ORIGINAL

Bouvardia triphylla, culture of the	171
-------------------------------------	-----

AUTHORS

B. query by	236
Barber. Mr. A. on the culture of the Dahlia by	1

NEW PLANTS

Boronia crenulata	90
Bousingaulata baseloides.	20

MISCELLANEOUS

Benthamia fragifera, query on	188
Buriensis, on the Vieusseuxia, by	92

C

ORIGINAL

Camellias, a list of	11, 28, 149
Carnations, on laying	195
Ditto, on watering the	150
Chinese Gardens, on	267
Chrysanthemums, on saving seed from	220
Conversation by Bloomwell and Wouldknow	59
Conversaciones, on, by Florists	108
Cratægus Oxantha and its varieties, on	269
Cuttings in Water, on striking	155

AUTHORS

Calceolaria, query by	67
Camelliæ, a list of Camellias by	11, 28, 149
Clericus, on watering plants	172
Ditto, query, by	92
Ditto, on Lantana Sellowi	166
Ditto, on a bed of Lobelias,	193
Ditto, on propagating roses	196
Colycinth, query by	22

NEW PLANTS

Catasetum atratum	290
Calcestemon microstachyum	65
Calystegia sepium	239
Camellia Japonica. v. Marchioness of Exeter	120
Campanula carpatia alba	239
Ditto barbata var. cyanea	21
Carica citrifolmis	65
Caslia pumila	163
Catleya Mossiæ	210
Ditto Perrinii	141
Centaurea depressa	187
Chorizema cordata	191
Ditto ovata	72
Chrysanthemum indicum v. Minerva	215
Chrysocomo squamata	43
Cirrhopetalum Thowarsii	65
Clematis Florida v. Siebaldii	72
Clintonia pulchella	24
Comus scabiosoides	90
Cosmus termifolius	20
Ditto. tenuifolius	47
Cymbidium triste	115
Cynoches ventricosus	41

MISCELLANEOUS

Cacti, query on	216
Cataleya guttata, remarks on	215
Chorizema ovata on.	189
Clianthus puniceus, on the	165
Cockscombs, query on	92

D

ORIGINAL.

Dahlia, on the culture of	1
Ditto, observations on the	12
Ditto, on grafting the	26
Ditto, observations on the	27

AUTHORS

Day, Mr. Richard, on the culture of <i>Bouvardia triphylla</i>	171
--	-----

NEW PLANTS

<i>Dianthus Bisignavi</i>	163
<i>Dodecatheon integrifolia</i>	43
<i>Dombeya canabina</i>	21
<i>Dracophyllum capitatum</i>	21
<i>Drimonia bicolor</i>	41

MISCELLANEOUS.

Dahlia flowers, query on	22
Dahlia Show, Birmingham	286
December, Calendar for	900

E

NEW PLANTS.

<i>Echinocactus tubiflorus</i>	41
<i>Epacris mucrophylla</i>	163
<i>Epidendrum papillosum</i>	42
Ditto <i>floribundum</i>	66
<i>Erica Chleroboma</i>	90
Ditto <i>furiosa</i> var. <i>campanulata</i>	90
<i>Euphorbia veneta</i>	66
Ditto <i>fulgens</i> , reference to plate	168

F

ORIGINAL

Flower beds, on the formation of ornamental	217
Flower Garden, a list of plants for the	223
Ditto ditto, plans of a	161
Ditto ditto a list of plants for furnishing beds in	203
Fuchsias, on the culture of in pots	289

AUTHORS.

Flora, on forming a bed of <i>Lobelias</i> , by	194
Ditto, on propagating <i>Roses</i> by	196
Ditto, on <i>Tropæolum tricolorum</i> by	169
Ditto, on the <i>Schizanthus</i> by	177
Freestone, Mr. Robert, on raising seedling <i>Chrysanthemums</i> by	220
Fyffe, Mr. John, on the <i>Hyacinth</i> by	25
Ditto ditto, on <i>Tropæolums</i> by	148

NEW PLANTS

<i>Funckia alba marginata</i>	163
<i>Funckia Sieboldiana</i>	209

MISCELLANEGUS

February, Calendar for	48
Flower and Kitchen Garden, query on a	92

Flowering Shrubs and ornamental Trees, query on	44
Flower garden, query, on	164
Flowers, on retarding the blooming of, query on	211
Fruit, Flower and Kitchen Garden, by Mr. Neill, reviewed	161
Fuchsia, answer on the	118
Fungus, query on the	67

G

ORIGINAL.

Geranium House, on the	273
Gladiolus psittacinus, on the culture of	77
Growing Plants in Rooms, on	286

NEW PLANTS.

Gesnera facialis	163
Ditto. tuberosa	209
Govea liliacea	91
Glycine Harrisonia, reference to plate	24

MISCELLANEOUS

Glycine Harrisonia, query on	118
Greenhouse and half hardy plants, in the open border. on	68
Greenhouse and stove plants, query on	44

H

ORIGINAL

Holly, remarks on the	198, 174
Hyacinths, on the culture of	25, 222

AUTHORS

Hardy, query by	211
H. F., on the Wisteria sinensis	118
H. G. S., on raising Ranunculus seed	109
Hill, The Rev. H., on the Shrubby	30, 85, 111
H. L., on the culture of the Hyacinth	222
Hyacinthus, query by	164

NEW PLANTS

Helicharyeum macranthum	290
Hibiscus liliacinus	21
Hovea Manglesii	291
Hydrotæma meleagris	239

MISCELLANEOUS

Heartsease, query, on dying	22
Herbaceous plants, a list of	93
Horticultural Society, Berks	165
Ditto ditto North Devon.	215
Hyacinths, query on	164

J.

AUTHORS.

J. B. on preserving Plants	5
J. B. W. Culture of the Ranunculus by	99
J. G. on the hardihood of the myrtle	221
J. M. List of plants for a flower garden, by	223
J. P. K. query by	212
J. W. D. on the Tropæolum tuberosum	202

L L

NEW PLANTS.		
<i>Jasminum glaucum</i>		43
MISCELLANEOUS		
July Calendar, for		168
L		
ORIGINAL		
<i>Lobelias</i> , for forming a bed in a Flower Garden		193
<i>Lychnis fulgens</i> , on the culture of		76
AUTHORS.		
Laura, on <i>Mesembryanthemums</i> , by		197
Louisa Harriet, on the culture of <i>Manetta cordata</i>		173
NEW PLANTS.		
<i>Lilium speciosum</i>		240
<i>Loaza laterita</i>		66, 155
<i>Lophospermum scandens</i>		240
MISCELLANEOUS		
<i>Latona Sellowii</i> , on		166
<i>Lisienthus rusellianthus</i>		47
Loamy soil, query on		164
<i>Lupinus polyphyllus albus</i> , query on		236
M		
ORIGINAL		
Major, Mr. Remarks upon his papers		9
<i>Manetha cordata</i> , and <i>M. grandiflora</i> , culture of		173
Merits of Iron and Wood Roofs, on the	49, 78,	104
<i>Mesembryanthemum</i> grown in the open bed		197
Myrtle, on the hardihood of		221
McP. on the culture of <i>Fuchsias</i> in pots		282
AUTHORS		
M. E. L. query by		118
Meta, on the culture of <i>Lychnis fulgens</i>		76
Meta, observations on annuals by		100
NEW PLANTS		
<i>Mammillaria atrata</i>		91
Ditto <i>floribunda</i>		115
Ditto <i>lehmanii</i>		66
<i>Maxillaria auro flava</i>		42
<i>Melocactus depressa</i>		291
<i>Mimulus Harrisonia</i>		191
Ditto <i>rosea cardinalis</i>		42
<i>Morna nivea</i>		8
<i>Morenia odorata</i>		239
MISCELLANEOUS		
March, Calendar for		70
May, Calendar for		119
Meetings to be held in London, remarks on		44
O		
AUTHORS		
Orbiologist, query by		212

MISCELLANEOUS

October, Floricultural Calendar for	240
-------------------------------------	-----

P

ORIGINAL.

Pansey, on the	202
Plants, directions for preserving	5
Plants, on watering	155, 172

AUTHORS

Patrick, on a list of succession plants for a Flower garden	214
---	-----

NEW PLANTS

<i>Passiflora nigelliflora</i>	89
<i>Passiflora onychina</i>	116
Ditto <i>Tucumanensis</i>	66
<i>Pavonia Shrankii</i>	291
<i>Penstemon heterophyllum</i> , reference to plate	240
Ditto <i>gladiolosum</i>	221
Ditto <i>Crassiofolius</i>	91
Ditto <i>diffusus</i>	116
<i>Petunia marquinata prasina</i> , reference to plate	160
<i>Petunia vittata</i> , reference to plate	168
<i>Phalænopsis amabilis</i>	209
<i>Philibertia grandiflora</i>	21
<i>Philadelphia hirsutus</i>	91
<i>Pleurothallis vittata</i>	290
<i>Pimelia crinita</i>	239
<i>Psoralea cinerea</i>	239

MISCELLANEOUS.

<i>Pelargoniums</i> , query on	188
Plants suited to a gravelly soil	189
Plants, on, some new	167
Plants, on hybridising	168

R

ORIGINAL.

<i>Ranunculus</i> , on the culture of the	99
Ditto on raising from seed	109
Rose, remarks on the	177, 203, 230, 280
Roses, on propagating by cuttings	196
Roses, a list of the most superb	224

AUTHORS.

Repton J. A. Esq. remarks on Mr. Major's communication by	9
Rosa, on the Pansey by	202
Rosa, remarks on the Rose by	152
Rose Amateur's Guide reviewed	17, 37
Rose Fancier's Manual reviewed	233, 292

NEW PLANTS.

<i>Ræperia aurantiacus</i>	239
<i>Rhododendron nudiflorum</i> var. <i>scintillans</i>	210
<i>Rondeletia odorata</i>	42

MISCELLANEOUS

<i>Rhododendron</i> , query on	236
Rose de Roi, query on	67

S

Schizanthus retusus, culture of	177
Shrubbery, remarks on the	30, 62, 87, 111

AUTHORS

Sir W. C. on Chinese Gardens	265
Slater, Mr. John, on raising Tulips from seed, by	73
Ditto, on compost for Tulips, by	97
Ditto, reply to observations on raising Tulips, by	103
Ditto, on Florists Conversazioni by	108
Ditto, remarks on the properties of Tulips, by	145
Star in the East, observations on Dahlias, by	27

NEW PLANTS

Salvia canescens	210
Solanum campanulatum	210
Sparaxis, (seedling) reference to plate	72
Stanhopea occulata, reference to plate	191
Ditto quadricomis	42
Stevia fascicularis	291

MISCELLANEOUS

September, Calendar for	215
Stove aquatics, query on	44

T

ORIGINAL

The Wind, quarters from which it blows every month in the year	278
Tropæolum, on the culture of the	148
Ditto, tricolorum, treatment of	169
Ditto, tuberosum, remarks on	202
Tulip, compost suitable for	97
Ditto, on raising from seed	73
Ditto, reply to observations on raising from seed	103
Ditto, Remarks on the properties of	145

AUTHORS.

Thomson, Mr. J. W. on the relative merits of Iron and Wood Roofs,	
by	49, 78
Ditto ditto a list of plants for furnishing beds in a Flower Garden	203
True Blue, query by	22
Turner, Mr. G. E. on the formation of Flower beds by	217

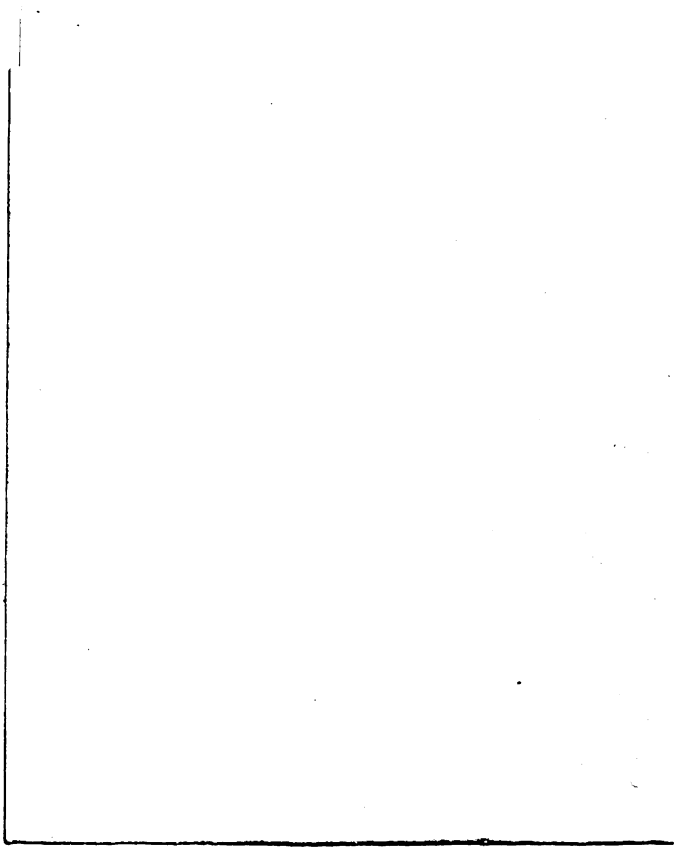
NEW PLANTS.

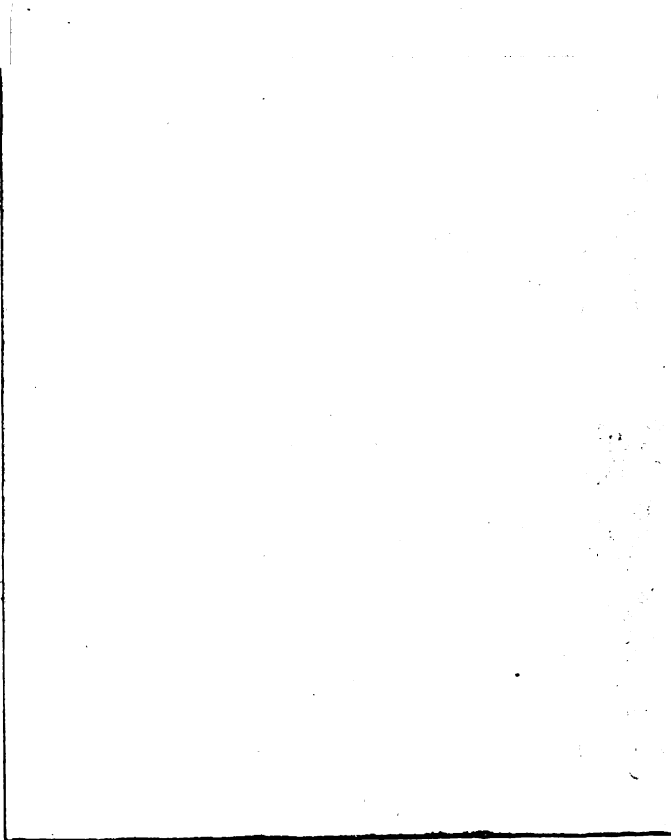
Thysanotus, proliferus	89
Tritonia faccata	210
Tropæolum, Jaratti, reference to plate	120
Ditto, tuberosum, reference to plate	120
Tweedia versicolor	42

MISCELLANEOUS.

Tropæolum tricolorum, query by	164
Tulips, query on	44

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
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